02-8902-02-PA
REV. NO. 0

FINAL DRAFT
PRELIMINARY ASSESSMENT
GAF CORPORATION
GLOUCESTER CITY, NEW JERSEY

PREPARED UNDER

TECHNICAL DIRECTIVE DOCUMENT NO. 02-8902-02
CONTRACT NO. 68-01-7346

FOR THE

ENVIRONMENTAL SERVICES DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

MARCH 23, 1989

NUS CORPORATION
SUPERFUND DIVISION

SUBMITTED BY:

CHARLES LOBUE
PROJECT MANAGER

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SITE MANAGER

REVIEWED/APPROVED BY:

RONALD M. NAMAN
FIT OFFICE MANAGER

POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT

PART I: SITE INFORMATION

1. Site Name/Alias GAF Corp.
   Street Water and Charles Streets
   City Gloucester City State New Jersey Zip 08030
2. County Camden County Code 007 Cong. Dist. NJ01
3. EPA ID No. NJD043292606
4. Latitude 39° 53' 26" N Longitude 075° 07' 44" W
   USGS Quad. Philadelphia Quadrangle
5. Owner GAF Corp. Tel. No. 609-456-1200 (Gloucester City) 201-628-3000 (Wayne)
   Street Water and Charles Streets
   City Gloucester City State New Jersey Zip 08030
6. Operator Same as owner Tel. No. _____
   Street _____
   City _____ State _____ Zip _____
7. Type of Ownership
   ☒ Private ☐ Federal ☐ State
   ☐ County ☐ Municipal ☐ Unknown ☐ Other _____
8. Owner/Operator Notification on File
   ☐ RCRA 3001 Date _____ ☐ CERCLA 103c Date _____
   ☐ None ☒ Unknown
9. Permit Information

Permit	Permit No.	Date Issued	Expiration Date	Comments
NJ Pollutant Discharge Elimination System (NJPDES)	NJ0005371	3/19/85	4/30/90	Exemption to terminate filed on 10/6/86.

10. Site Status
    ☐ Active ☒ Inactive ☐ Unknown
11. Years of Operation 1927 to 1984
12. Identify the types of waste units (e.g., landfill, surface impoundment, piles, stained soil, above- or below-ground tanks or containers, land treatment, etc.) on site. Initiate as many waste unit numbers as needed to identify all waste sources on site.

    (a) Waste Management Areas

Waste Unit No.	Waste Unit Type	Facility Name for Unit
1	PCB spill	PCB spill
2	Landfill	Asbestos dump

(b) Other Areas of Concern

Identify any miscellaneous spills, dumping, etc. on site; describe the materials and identify their locations on site.

A surface impoundment (lagoon) may have existed at the site. This was identified as a potential recipient of waste in aerial photographs taken in 1940 and 1978. (Ref. No. 5)

At least two additional spill incidents occurred at the site. In May 1979, 300 gallons of No. 6 fuel oil was spilled, some of which subsequently entered the combined municipal storm/sanitary sewer system. This system has several discharge points along the Delaware River. This spill was reportedly cleaned up and disposed of off site. It is unknown whether any cleanup of the affected sewer system took place. The second spill involved the overflow of 2000 gallons of process water from a tank in 1983. The spill was reportedly soaked up and returned to the process tank from which it overflowed. (Ref. No. 30)

On September 15, 1986, at least 70 drums of hazardous waste were removed by Clean Venture, Inc., including waste corrosive liquids and solids (13); waste flammable liquids and solids (15); waste poisonous liquid and poisonous solids (3); waste petroleum oil (1); waste calcium oxide (1), sodium nitrate (1), sodium aluminate (1), and chromic acid solution (1); and 25 drums described either as hazardous waste solid or hazardous waste liquid. Storage practices associated with these wastes are not indicated in available information. (Ref. No. 24)

13. **Information available from**

Contact Amy Brochu **Agency** U.S. EPA **Tel. No.** (201) 906-6802

Preparer Thomas Varner **Agency** NUS Corp. Region 2 FIT **Date** March 16, 1989

PART II: WASTE SOURCE INFORMATION

For each of the waste units identified in Part I, complete the following six items.

Waste Unit 1 - PCB spill PCB spill

1. **Identify the RCRA status and permit history, if applicable, and the age of the waste unit.**

   Not applicable.

2. **Describe the location of the waste unit and identify clearly on the site map.**

   The precise location of this spill is not indicated in available information.

3. **Identify the size or quantity of the waste unit (e.g., area or volume of a landfill or surface impoundment, number and capacity of drums or tanks). Specify the quantity of hazardous substances in the waste unit.**

   Approximately 300 to 400 gallons of Askarel, a liquid containing polychlorinated biphenyls (PCBs), was spilled on April 14, 1978.

4. **Identify the physical state(s) of the waste type(s) as disposed of in the waste unit. The physical state(s) should be categorized as follows: solid, powder or fines, sludge, slurry, liquid, or gas.**

   The discharged Askarel was in the liquid state.

5. **Identify specific hazardous substance(s) known or suspected to be present in the waste unit.**

   PCBs were present in the spilled liquid.

6. **Describe the containment of the waste unit as it relates to contaminant migration via groundwater, surface water, and air.**

   Available information indicates that the PCB-contaminated liquid was drummed at least the same year in which it was spilled, and possibly even on the same day. However, a waste manifest (No. NJA0027698) indicates that PCB-contaminated soil and a transformer carcass were transported from the site on September 12, 1985. Twelve more cubic yards of PCB-contaminated soil was removed on April 29, 1986. PCB-contaminated particulates may therefore have been transported overland to the Delaware River between the time of the spill and the time of waste removal, if no containment measures were implemented during that period. It was also possible for rainwater to leach contaminants, which then could have subsequently passed through soil to the water table.

Ref. Nos. 5, 16, 17, 18, 30

PART II: WASTE SOURCE INFORMATION

For each of the waste units identified in Part I, complete the following six items.

Waste Unit 2 - Landfill Asbestos dump

1. **Identify the RCRA status and permit history, if applicable, and the age of the waste unit.**

   Asbestos was disposed of at the site as early as 1967. Removal of this asbestos is not documented in available information. RCRA status and permit history are not applicable to this waste unit.

2. **Describe the location of the waste unit and identify clearly on the site map.**

   Asbestos was dumped in an area between the facility and the Delaware River; the exact location is not documented in available information.

3. **Identify the size or quantity of the waste unit (e.g., area or volume of a landfill or surface impoundment, number and capacity of drums or tanks). Specify the quantity of hazardous substances in the waste unit.**

   Approximately 12 to 15 percent of the asbestos produced at this facility was discarded. This quantity is not documented in available information.

4. **Identify the physical state(s) of the waste type(s) as disposed of in the waste unit. The physical state(s) should be categorized as follows: solid, powder or fines, sludge, slurry, liquid, or gas.**

   The asbestos was disposed of as a solid.

5. **Identify specific hazardous substance(s) known or suspected to be present in the waste unit.**

   Only asbestos is known or suspected to be present in this unit.

6. **Describe the containment of the waste unit as it relates to contaminant migration via groundwater, surface water, and air.**

   There is a potential for asbestos fibers to become airborne or to be transported to the Delaware River in runoff, if the asbestos was not properly contained (e.g., covered with soil, etc.)

Ref. No. 5

PART III: HAZARD ASSESSMENT

GROUNDWATER ROUTE

1. **Describe the likelihood of a release of contaminant(s) to the groundwater as follows: observed, alleged, potential, or none. Identify the contaminant(s) detected or suspected, and provide a rationale for attributing the contaminant(s) to the facility.**

   There is a potential that rainwater leached PCBs, which would have been subsequently transported to the water table. PCB-contaminated soil may have remained on site for as long as 7 years (1978 to 1985). It is unknown whether any containment measures were implemented during that period.

   Ref. Nos. 18, 30

2. **Describe the aquifer of concern; include information such as depth, thickness, geologic composition, permeability, overlying strata, confining layers, interconnections, discontinuities, depth to water table, groundwater flow direction.**

   The aquifer of concern consists of the Potomac Group and the Magothy and the Raritan Formations, the last two being undifferentiated because of similar lithology. These three formations, taken as a whole, are considered one aquifer system because of their hydrologic interconnection. This aquifer system consists of three water-bearing layers of sand with some gravel, separated by layers of silt and clay, and contains the most important and productive water-bearing units in Camden and Gloucester Counties.

   The site is located in an outcrop area of the Magothy Formation, which is overlain extensively by highly permeable (and hydraulically connected) Pleistocene sand and gravel. The combined thickness of the Potomac-Magothy-Raritan System ranges from 260 to 1210 feet in Camden County. The depth to the water table is 57 feet, as indicated by data for an industrial well, located 670 feet from the site, owned by the Amspec Specialty Chemical Company (formerly the Harshaw Chemical Company). Local and regional groundwater flow within the aquifer of concern (which extends areally throughout the county) is northwest toward the Delaware River. The coefficient of permeability of the water-bearing zones within the aquifer system averages 1,000 gallons per day per square foot, or 4.72×10^{-2} cm/sec. The permeability of the overlying water table aquifer is greater than 10^{-3} cm/sec. The Potomac-Magothy-Raritan aquifer system is part of a designated sole source aquifer system (New Jersey Coastal Plain Aquifer System).

   Ref. Nos. 1, 2, 3, 4, 6

3. **Is a designated sole source aquifer within 3 miles of the site?**

   Yes, the site lies in an outcrop area (recharge area) of the Potomac-Magothy-Raritan aquifer system, part of the New Jersey Coastal Plain Aquifer System.

   Ref. Nos. 1, 6

4. **What is the depth from the lowest point of waste disposal/storage to the highest seasonal level of the saturated zone of the aquifer of concern?**

   The water level in a well located approximately 670 feet from the site indicates that the depth to the water table is 57 feet.

   Ref. Nos. 1, 33

5. **What is the permeability value of the least permeable continuous intervening stratum between the ground surface and the aquifer of concern?**

The permeability of overlying sands and gravel, if present above the aquifer outcrop at the site, is greater than 10^{-3} cm/sec.

Ref. Nos. 1, 3

6. **What is the net precipitation for the area?**

The net precipitation is 10 inches (44 - 34 = 10).

Ref. No. 3

7. **Identify uses of groundwater within 3 miles of the site (i.e., private drinking source, municipal source, commercial, industrial, irrigation, unusable).**

Groundwater from the aquifer of concern is the sole source of drinking water within 3 miles of the site. The New Jersey Water Company owns three wells that are part of a 50-well system in which common distribution lines are used. This system serves a population of 260,000 people. The Gloucester City Water Department owns four wells that deliver water to 13,400 people. One of these wells is the closest supply well that draws from the aquifer of concern; it lies 0.84 mile from the site. Four wells owned by the Bellmawr Boro Water Department serve 9,522 people with drinking water. Other public supply wells of note include Camden City Water Department wells (13), Brooklawn Boro Water Department wells (4), Westville Water Department wells (2), and one West Deptford Township well. All of the above-named wells lie within 3 miles of the site and draw water from the aquifer of concern.

A domestic supply well and 12 industrial supply wells that are completed in the Potomac-Magothy-Raritan aquifer system and lie within 3 miles of the site are listed in Table 1. No commercial or irrigation wells are potentially affected by the site.

Ref. Nos. 1, 6, 7, 8, 9, 10

8. **What is the distance to and depth of the nearest well that is currently used for drinking or irrigation purposes?**

Distance 0.84 mi **Depth** 306 ft

Ref. No. 1

9. **Identify the population served by the aquifer of concern within a 3-mile radius of the site.**

Approximately 282,900 people are served with drinking water from the aquifer of concern within 3 miles of the site.

Ref. Nos. 7, 9, 10

SURFACE WATER ROUTE

10. **Describe the likelihood of a release of contaminant(s) to surface water as follows: observed, alleged, potential, or none. Identify the contaminant(s) detected or suspected, and provide a rationale for attributing the contaminants to the facility.**

There is potential for a release of contaminants to surface water. PCB-contaminated soil may have remained on site (uncontained) for as long as 7 years (1978 to 1985). There may also be a

potential for migration of asbestos if this waste was not covered or otherwise properly contained. Two NJPDES-permitted pipes used for noncontact cooling water discharged directly to the Delaware River; however, this water is not known to have contained any hazardous substances.

Ref. Nos. 5, 18, 30

11. **Identify and locate the nearest downslope surface water. If possible, include a description of possible surface drainage patterns from the site.**

The nearest downslope surface water is the Delaware River, which borders the site on the west.

Ref. No. 4

12. **What is the facility slope in percent? (Facility slope is measured from the highest point of deposited hazardous waste to the most downhill point of the waste area or to where contamination is detected.)**

Available information does not indicate the locations of the spills. However, an off-site reconnaissance conducted by the NUS Corp. Region 2 FIT on February 7, 1989, indicates that the facility property is essentially level (slope less than 1 percent).

Ref. Nos. 5, 16, 27

13. **What is the slope of the intervening terrain in percent? (Intervening terrain slope is measured from the most downhill point of the waste area to the probable point of entry to surface water.)**

Available information does not indicate the locations of the spills; therefore, the slope of the intervening terrain cannot be calculated.

Ref. Nos. 5, 16

14. **What is the 1-year 24-hour rainfall?**

The 1-year 24-hour rainfall is 2.7 inches.

Ref. No. 3

15. **What is the distance to the nearest downslope surface water? Measure the distance along a course that runoff can be expected to follow.**

The Delaware River borders the site on the west. However, since available information does not indicate spill locations, the distance from the deposited waste to the Delaware River cannot be determined.

Ref. Nos. 4, 5, 16

16. **Identify uses of surface waters within 3 miles downstream of the site (i.e., drinking, irrigation, recreation, commercial, industrial, not used).**

The Delaware River is used for recreation (boating) and industrial purposes. There are two industrial water intakes within 3 miles of the site (GAF is approximately at river-mile 96). The Delaware River is not used for drinking or agricultural purposes within 3 stream-miles of the site.

Ref. Nos. 11, 13

17. **Describe any wetlands, greater than 5 acres in area, within 2 miles downstream of the site. Include whether it is a freshwater or coastal wetland.**

Two coastal wetlands (tidal flats) lie within 2 miles downstream of the site. One is approximately 80 acres in area and lies 0.63 mile downstream of the site. The other is approximately 320 acres in area and lies 1.5 miles downstream of the site.

Ref. Nos. 4, 15

18. **Describe any critical habitats of federally listed endangered species within 2 miles of the site along the migration path.**

No critical habitats of federally listed endangered species exist within 2 miles downstream of the site.

Ref. No. 12

19. **What is the distance to the nearest sensitive environment along or contiguous to the migration path (if any exist within 2 miles)?**

An 80-acre coastal wetland (tidal flat) lies 0.63 mile downstream from the site.

Ref. Nos. 4, 15

20. **Identify the population served or acres of food crops irrigated by surface water intakes within 3 miles downstream of the site and the distance to the intake(s).**

Not applicable.

21. **What is the state water quality classification of the water body of concern?**

The state water quality classification of the pertinent section of the Delaware River is Zone 3 waters.

Ref. No. 14

22. **Describe any apparent biota contamination that is attributable to the site.**

There is no documented biota contamination attributable to this site. Also, no biota contamination was noted during an NUS Corp. Region 2 FIT off-site reconnaissance conducted on February 7, 1989.

Ref. No. 27

AIR ROUTE

23. **Describe the likelihood of a release of contaminant(s) to the air as follows: observed, alleged, potential, none. Identify the contaminant(s) detected or suspected, and provide a rationale for attributing the contaminant(s) to the facility.**

There is a potential for asbestos fibers to become airborne if the asbestos waste is not properly contained (e.g., covered with soil, etc.).

There is no potential for a release of any other contaminants to the air. All remaining bulk hazardous waste and contaminated soil were removed from the site between 1985 and 1986.

Ref. Nos. 5, 18, 22, 23, 24, 25, 30

24. What is the population within a 4-mile radius of the site?

There are approximately 311,300 people that live within 4 miles of the site.

Ref. No. 26

FIRE AND EXPLOSION

25. Describe the potential for a fire or explosion to occur with respect to the hazardous substance(s) known or suspected to be present on site. Identify the hazardous substance(s) and the method of storage or containment associated with each.

There is no potential for a fire or explosion to occur. All remaining hazardous materials were removed from the site between 1985 and 1986.

Ref. Nos. 16, 18, 22, 23, 24, 25, 30

26. What is the population within a 2-mile radius of the hazardous substance(s) at the facility?

There are approximately 39,900 people that live within 2 miles of the site.

Ref. No. 26

DIRECT CONTACT/ON-SITE EXPOSURE

27. Describe the potential for direct contact with hazardous substance(s) stored in any of the waste units on site or deposited in on-site soils. Identify the hazardous substance(s) and the accessibility of the waste unit.

There is a potential for direct contact with the asbestos waste since it is unknown if this waste was properly covered.

There is little potential for direct contact with any other hazardous substances at the site. Property access is limited by a fence, and contaminated soils and all hazardous materials were removed between 1985 and 1986.

Ref. Nos. 5, 16, 18, 22, 23, 24, 25, 27, 30

28. How many residents live on a property whose boundaries encompass any part of an area contaminated by the site?

None. GAF Corp. is located in a commercial/industrial area of Gloucester City; there are no residents within 0.25 mile of the site.

Ref. Nos. 4, 26

29. What is the population within a 1-mile radius of the site?

There are approximately 11,800 people that live within 1 mile of the site.

Ref. No. 26

TABLE 1: DOMESTIC AND INDUSTRIAL SUPPLY WELLS WITHIN 3 MILES OF GAF CORP. THAT DRAW FROM THE AQUIFER OF CONCERN

Owner	No. of Wells	Use	Depth or Range of Depths (ft)
H.W. Wilson, Jr.	1	Domestic	112
Public Service Electric and Gas	1	Industrial	130
Hinde and Dauch	3	Industrial	260,261 (2)
Harshaw Chemical Co.	3	Industrial	251-266
G & W Natural Resources (formerly known as N.J. Zinc Co.)	5	Industrial (site is currently inactive)	175-279

Ref. Nos. 1, 19, 20

PART IV: SITE SUMMARY AND RECOMMENDATIONS

GAF Corporation is a privately owned, 36-acre site located in a commercial/industrial section of Gloucester City, Camden County, New Jersey. The facility occupies property adjacent to the Delaware River, and lies within 1.5 miles of approximately 400 acres of coastal wetlands (tidal flats). Over a quarter of a million people depend on groundwater (from a sole source aquifer) for drinking within 3 miles of the site.

The facility was originally owned and operated by the Ruberoid Corporation from 1927 until 1967, when it merged with GAF Corporation. Operations conducted at the site included the use of paper, woodchips, and sawdust to make felt paper for roofing, flooring, and vinyl siding. All manufacturing activities ceased in 1984. Following this, GAF Corp. filed an exemption to terminate its NJPDES permit, which had previously allowed the company to discharge 0.22 million gallons per day (mgd) of power plant and 0.20 mgd of felt mill noncontact cooling water to the Delaware River. Asbestos used for pipe insulation was also produced at this facility. Ruberoid and GAF Corp. both used an area between the facility and the Delaware River as a dump for some of the asbestos waste until 1971. Some asbestos waste was also removed from the facility and used as fill in areas of Gloucester County.

At least three notable spills occurred at the site. On April 14, 1978, approximately 300 to 400 gallons of Askarel, a PCB-contaminated fluid, was discharged onto the ground surface. This spill was reportedly cleaned up to the satisfaction of the NJDEP on the same day that it occurred; however, manifest documents indicate that PCB-contaminated soil and a transformer carcass were not removed until 1985 and 1986. On May 27, 1979, approximately 300 gallons of No. 6 fuel oil was spilled. This liquid was recovered and disposed of off site, but not before it reached the combined storm/sanitary sewer system. The oil is not known to have been a waste oil. Also, approximately 2000 gallons of water was discharged from a process tank in 1983. The water was reportedly absorbed and returned to the tank.

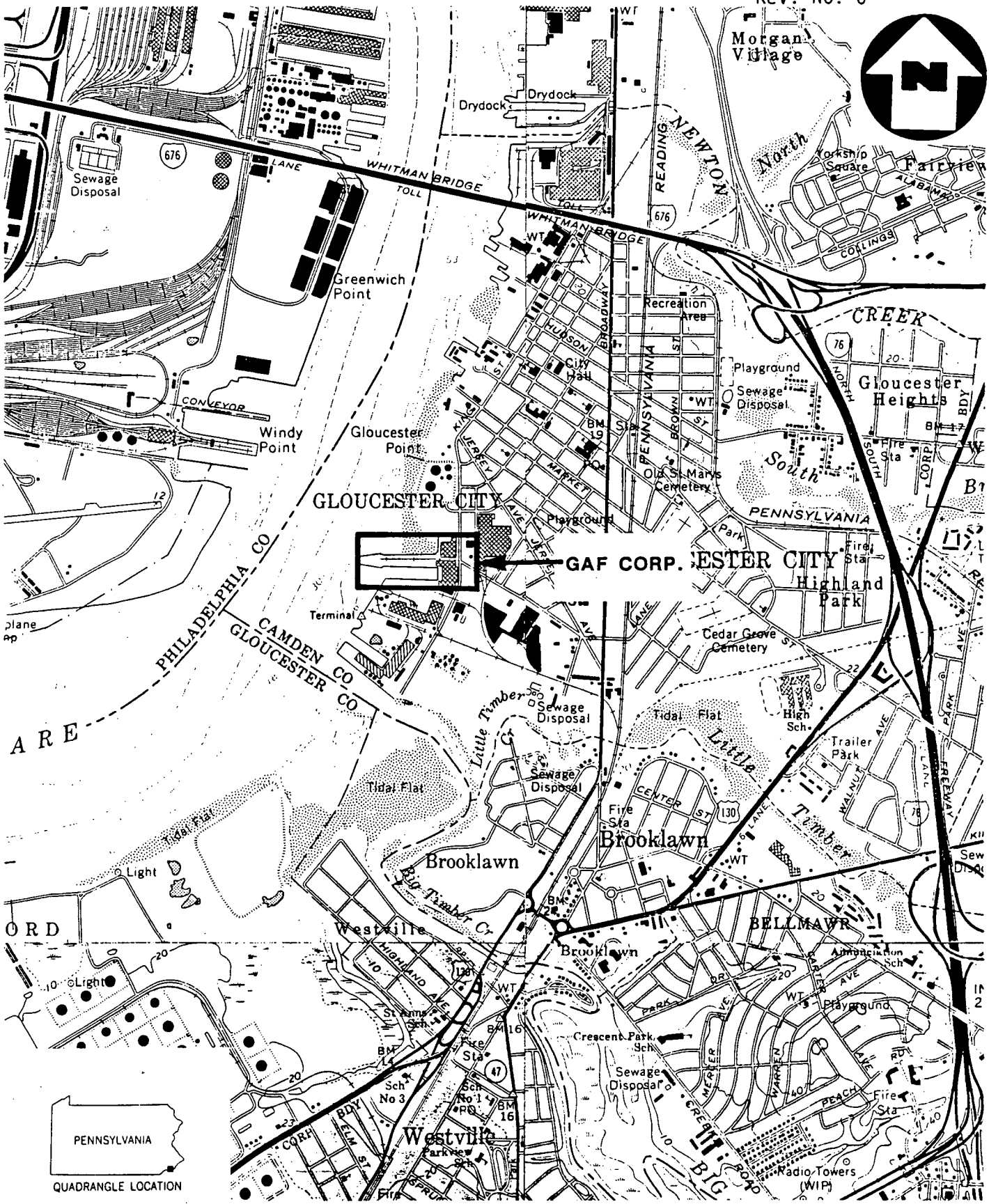
Media potentially affected by migration of hazardous contaminants (PCBs) include groundwater and the nearby Delaware River. No other cleanup actions are known to have been required by the NJDEP (or any other agency) in addition to those originally implemented by GAF Corp. There is little potential for direct contact since property access is limited by a fence, and contaminated soil and all hazardous materials were removed from the site between 1985 and 1986.

Because of the large number of people who depend on groundwater for drinking and the presence of two sensitive environments near the site, a **MEDIUM PRIORITY** site inspection is recommended for this site.

ATTACHMENT 1

GAF CORP.
GLOUCESTER CITY, NEW JERSEY

Figure 1: Site Location Map
Figure 2: Site Map
Exhibit A: Photograph Log



(QUAD) PHILADELPHIA, PA.-N.J.

FIGURE 1

SITE LOCATION MAP

GAF CORP., GLOUCESTER CITY, N.J.

SCALE: 1" = 2000'

NUS CORPORATION

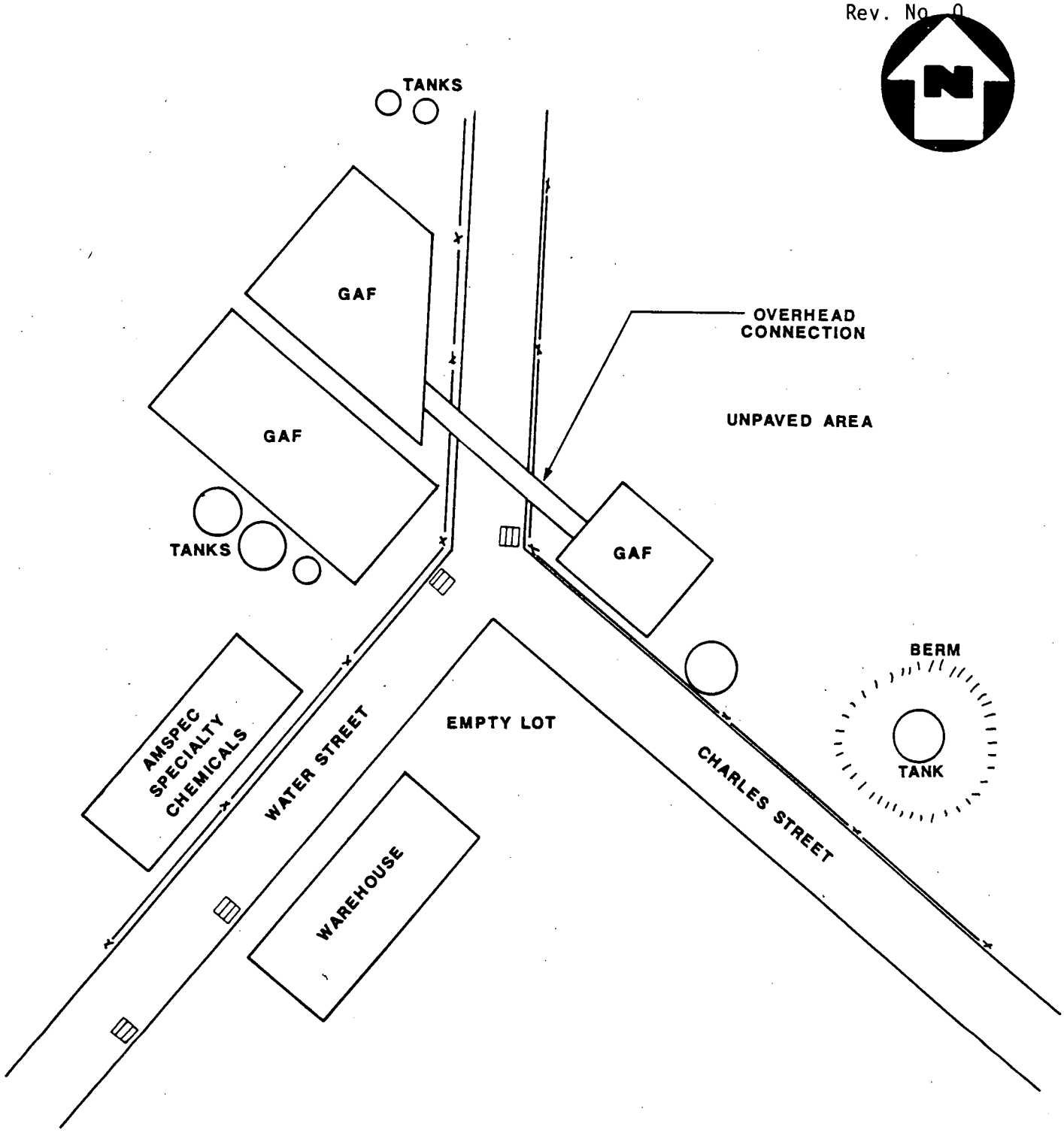


FIGURE 2

SITE MAP

GAF CORP., GLOUCESTER CITY, N.J.

NOT TO SCALE

NUS CORPORATION

EXHIBIT A

PHOTOGRAPH LOG

GAF CORPORATION
GLOUCESTER CITY, NEW JERSEY

Off-Site Reconnaissance: February 7, 1989

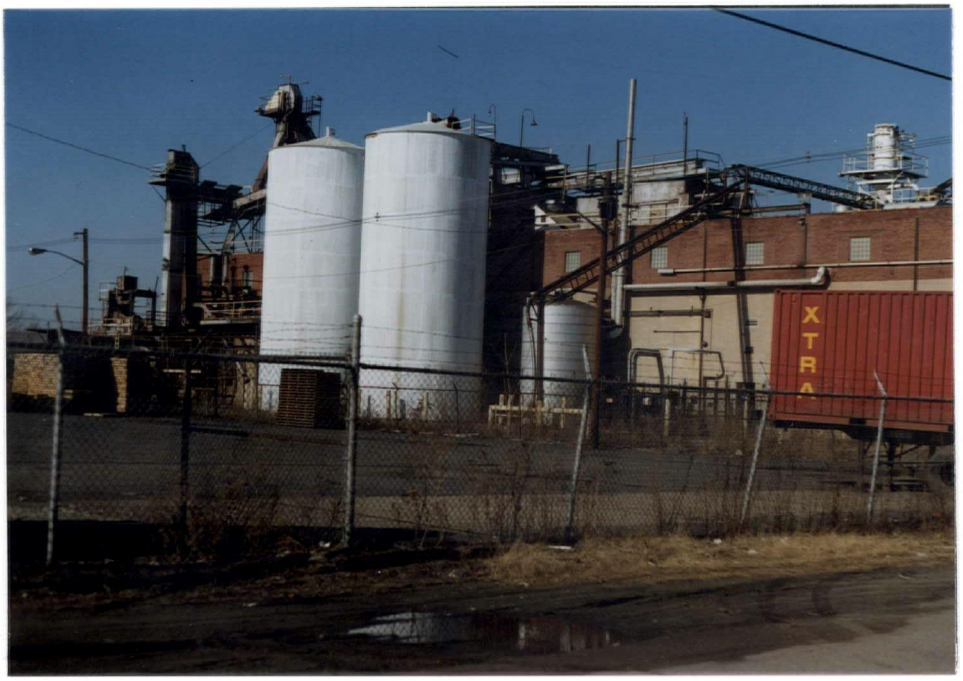
GAF CORPORATION
GLOUCESTER CITY, NEW JERSEY
FEBRUARY 7, 1989

PHOTOGRAPH INDEX

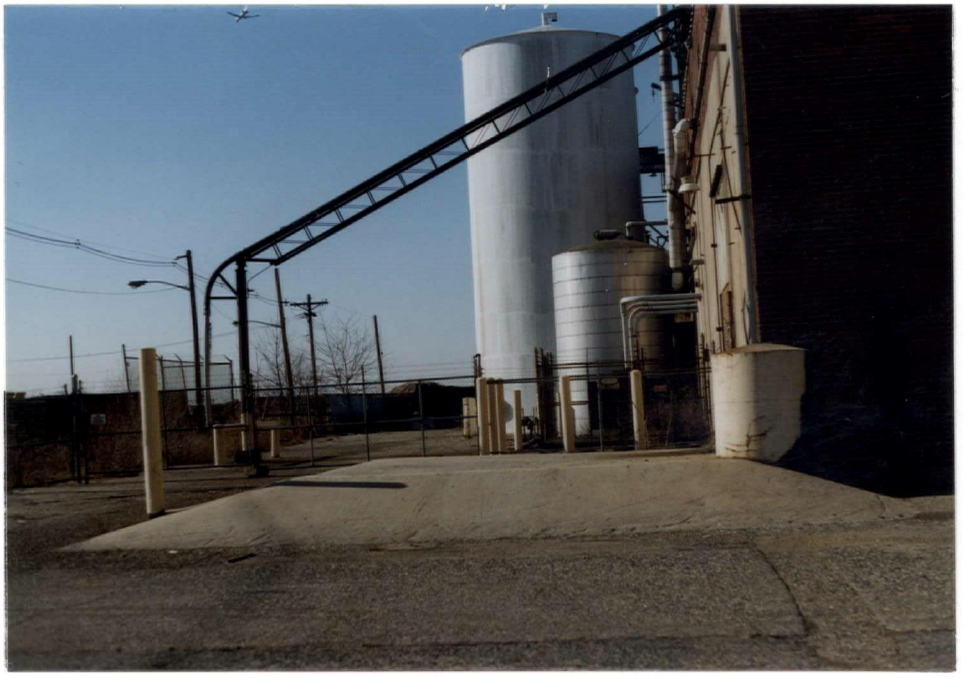
Photo Number	Description	Time
1P-11	Looking northwest at south wall of GAF.	1402
1P-12	Looking west at southeast corner of GAF.	1404
1P-13	Looking south down Water Street at GAF.	1415
1P-14	Looking west from Charles Street to east side of GAF.	1418

Photos 1P-11 and 1P-12 taken by B. Dietz.
Photos 1P-13 and 1P-14 taken by E. Knyfd.

GAF CORPORATION, GLOUCESTER CITY, NEW JERSEY



1P-11 February 7, 1989 1402
Looking northwest at south wall of GAF.



1P-12 February 7, 1989 1404
Looking west at southeast corner of GAF.

GAF CORPORATION, GLOUCESTER CITY, NEW JERSEY

1P-13 February 7, 1989 1415
Looking south down Water Street at GAF.

1P-14 February 7, 1989 1418
Looking west from Charles Street to east side of GAF.

ATTACHMENT 2

REFERENCES

1. Geology and Ground-Water Resources of Camden County, New Jersey. U.S. Geological Survey Water Resources Investigations 76-76.

2. Hardt, William F. and George S. Hilton. Water Resources and Geology of Gloucester County, New Jersey. Special Report 30, State of New Jersey Department of Conservation and Economic Development, Division of Water Policy and Supply, 1969.

3. Uncontrolled hazardous waste site ranking system, A user's manual, 40 CFR, Part 300, Appendix A, 1986.

4. U.S. Department of the Interior, Geological Survey Topographic Map, 7.5 minute series, "Philadelphia Quadrangle, PA-NJ", 1967, photorevised 1973.

5. NJDEP memorandum from Stephan A. Borgianini, Bureau of Planning and Assessment, to David Shotwell, Bureau of Field Operations, Subject: Referral of General Aniline and Film (GAF). January 13, 1988.

6. New Jersey Coastal Plain Aquifer System, New Jersey Sole Source Aquifer Final Determination, Federal Register, Vol. 53, No. 122, June 24, 1988.

7. Telecon Note: Conversation between Mr. Ed Knicely, Gloucester City Water Department, and Gary Rojek, NUS Corp., February 14, 1989.

8. Letter from Mr. Edward J. Phelps, West Deptford Water and Sewer Department Superintendent, to Laura LaForge, NUS Corp., July 11, 1988.

9. Telecon Note: Conversation between Mr. Bill Beckett, Bellmawr Boro Water Department, and Thomas Varner, NUS Corp., June 27, 1988.

10. Telecon Note: Conversation between Mr. Ron Elkner, New Jersey Water Company, and Thomas Varner, NUS Corp., June 24, 1988.

11. Telecon Note: Conversation between Mr. John Rattie, Delaware River Basin Commission, and Tammy Marquart, NUS Corp., February 14, 1989.

12. Letter from Clifford G. Day, United States Department of the Interior, Fish and Wildlife Service, to Valerie Mathers, NUS Corp., February 7, 1989.

13. Telecon Note: Conversation between Mr. John Rattie, Delaware River Basin Commission, and Thomas Varner, NUS Corp., February 15, 1989.

14. New Jersey Department of Environmental Protection/Division of Water Resources. State Water Quality Standards, N.J.A.C. 7:9-4, Index C-Surface Water Classifications of the Delaware River Basin, May 1985.

15. New Jersey Department of Environmental Protection/Bureau of Geology and Topography. Land Use Overlay Sheet 31, 1978.

16. Telecon Note: Conversation between Ms. Carol Graubart, NJDEP/Bureau of Case Management, and Thomas Varner, NUS Corp., February 21, 1989.

REFERENCES (cont'd)

17. Letter from H.J. Holloway, GAF Corporation, to Mr. Richard A. Baker, U.S. EPA/Permits Administration Branch. March 6, 1984.

18. NJDEP/Division of Waste Management, Uniform Hazardous Waste Manifest, No. 0027698. September 12, 1985.

19. NJDEP RCRA Evaluation Form Summary Sheet, Gulf & Western Natural Resources.

20. NJDEP Field Record of Violation, Gulf & Western Natural Resources, February 11, 1982.

21. Letter from H.J. Holloway, GAF Corp., to NJDEP/Office of Permits Administration. May 15, 1984.

22. NJDEP Report of Phone Call from Fred Bright, GAF Corp., April 29, 1987.

23. NJDEP/Division of Waste Management Investigation Report, completed by Scott J. Frow, April 27, 1987.

24. NJDEP/Division of Waste Management, Uniform Hazardous Waste Manifests, Nos. NJA0180000, NJA0234636, and NJA0234639 to NJA0234642. September 15, 1986.

25. NJDEP/Division of Waste Management, Uniform Hazardous Waste Manifests, Nos. NJA0240406 and NYA2701539.

26. General Sciences Corporation, Graphical Exposure Modeling Systems (GEMS). Landover, Maryland, 1986.

27. Off-Site Reconnaissance Information Reporting Form, GAF Corp., TDD No. 02-8902-02, NUS Corp., Region 2 FIT, Edison, New Jersey, February 7, 1989.

28. Telecon Note: Conversation between Ms. Carol Graubart, NJDEP/Bureau of Case Management, and Thomas Varner, NUS Corp., February 22, 1989.

29. Telecon Note: Conversation between Mr. Bob Clark, Camden County Municipal Utilities Authority, and Thomas Varner, NUS Corp., February 22, 1989.

30. Telecon Note: Conversation between Ms. Clare Whittaker, NJDEP/Bureau of Planning and Assessment, and Thomas Varner, NUS Corp., February 27, 1989.

31. Affidavit of Exemption from the New Jersey Pollutant Discharge Elimination System Permit, Permit No. NJ0005371. October 6, 1986.

32. NJDEP, May 1, 1985, New Jersey Department of Environmental Protection, New Jersey Pollutant Discharge Elimination System Discharge Permit, Permit No. NJ0005371 for GAF Corp., Gloucester City plant.

33. Water levels in major artesian aquifers of the New Jersey coastal plain, 1983. U.S. Geological Survey Water-Resources Investigations Report 86-4028.

REFERENCE NO. 1

GEOLOGY AND GROUND-WATER RESOURCES OF CAMDEN COUNTY NEW JERSEY

By George M. Farlekas, Bronius Nemickas, and Harold E. Gill

U.S. GEOLOGICAL SURVEY
Water-Resources Investigations 76–76

Prepared in cooperation with
NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION, DIVISION OF WATER RESOURCES

June 1976

Cretaceous System

Potomac Group and the Raritan and Magothy Formations

Regional Setting and Stratigraphic Framework

The Potomac Group and the Raritan and Magothy Formations are fluvial-marginal marine sediments of Early to Late Cretaceous age and overlie the pre-Cretaceous crystalline rocks. These sediments make up an extensive part of the Coastal Plain sediments in New Jersey and in the adjacent states. Major structures which contain the greatest thickness of sediments are the Salisbury embayment (Richards, 1945) in Delaware and the Raritan embayment in the vicinity of Raritan Bay and eastern Long Island. The area between these two embayments, which includes Camden County, contains smaller arches and troughs. The outcrop area of the Potomac Group and Raritan and Magothy Formations in Camden County (21 square miles in area) is in the northwestern part of the county near the Delaware River. The units are extensively overlain by permeable Pleistocene deposits in the outcrop area.

The Potomac Group and the Raritan and Magothy Formations form a wedge-shaped body that thickens in a downdip direction and is underlain by the crystalline basement. The configuration of the crystalline rocks is shown in figure 7. The upper limit of the wedge-shaped body is the contact between the Merchantville Formation and the top of the Magothy Formation (fig. 8). The difference between the basement and the top of the Magothy is the total thickness of Potomac Group and the Raritan and Magothy Formations (fig. 9).

In Camden County the thickness of the Potomac Group and Raritan and Magothy Formations ranges from approximately 260 feet at the Collingswood well 7 (CO 7), located near the outcrop area, to approximately 1,210 feet at the New Brooklyn Park test well (WI 27). This is shown on the thickness map in figure 9. The distance between the two wells is 13 miles.

Correlation of part of the Cretaceous stratigraphic section in northern New Jersey and Maryland as determined by Wolfe and Pakiser (1971) is given below.

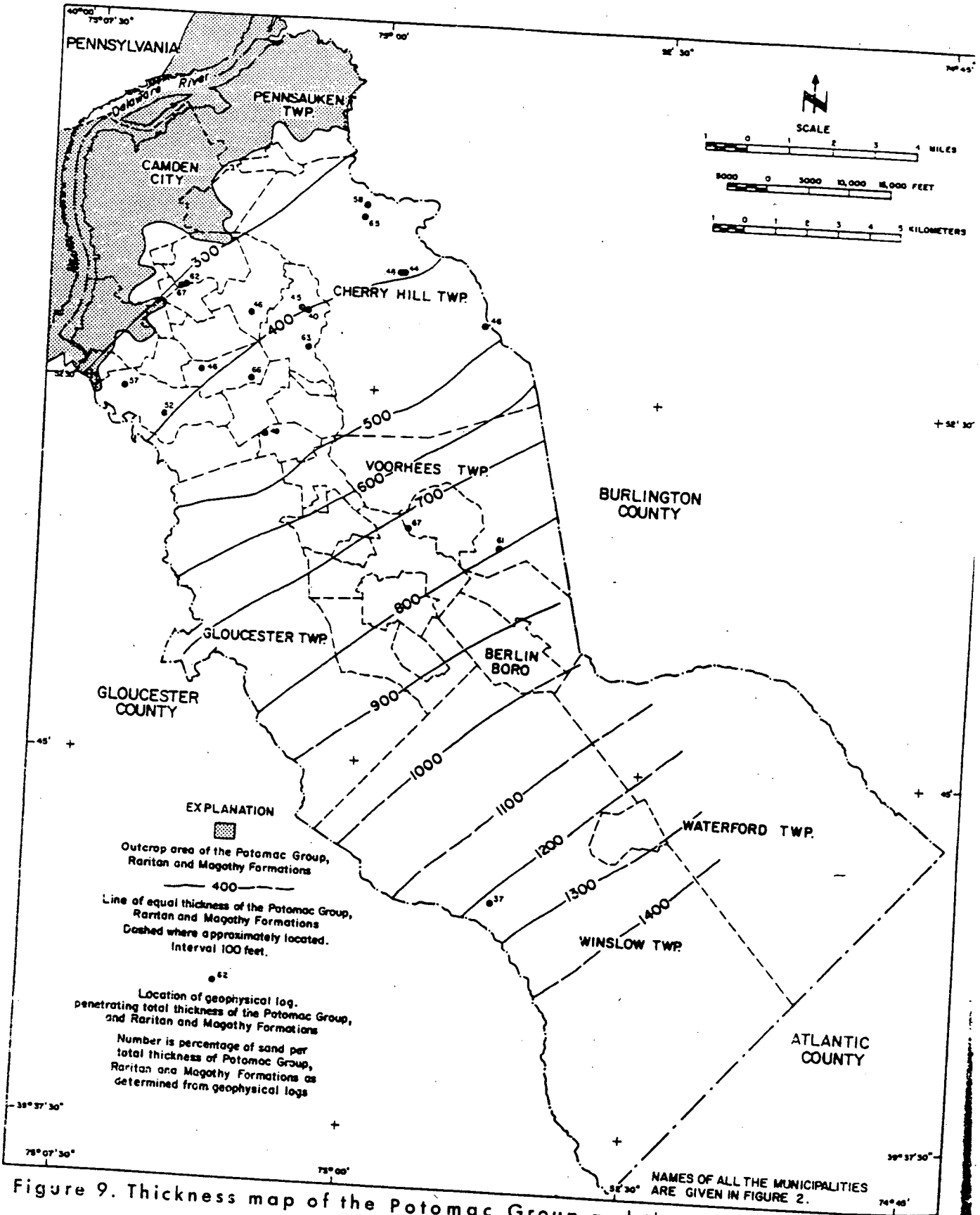


Figure 9. Thickness map of the Potomac Group and the Raritan and Magothy Formations in Camden County.

probably extended from Philadelphia to the area updip from New Brooklyn Park.

A thickness map of the Potomac Group and the Raritan and Magothy Formations is given in figure 9. Also shown is the percentage of sand as estimated from geophysical logs from wells that penetrate the section from the top of the Magothy to the crystalline rocks. The thickness lines show the thickening of the sediments downdip. The percentage of sand indicates greater values in the updip area and lower values in the downdip area. The estimated percentage of sand at the New Brooklyn Park well (WI 27) is 37. Based on the depositional concept developed by Fisher and McGowen (1969) the New Brooklyn Park well is interpreted as being in the distributary channel-marsh and swamp facies. The sediments found in the Haddonfield area are interpreted as including the transitional, slightly meandering channel facies of Fisher and McGowen (1969). The dendritic tributary channel facies is interpreted as occurring in the area from Philadelphia to the northern part of Camden County. The highly meandering channel facies probably occurs in the area downdip from Elm Tree Farms well (VO 12). Lack of data prevents the delineation of the extent of this facies downdip of the Elm Tree Farms area.

Particle-size analysis is available for samples from the New Brooklyn Park test well (WI 27) in Winslow Township (table 5). The particle-size analysis shows the predominant silt and clay values.

Hydrology

The most productive source of ground water in Camden County is the Potomac-Raritan-Magothy aquifer system. The aquifer system is made up of aquifers consisting of sand with some gravel and confining units consisting of silts and clays and is overlain in the outcrop area by highly permeable Pleistocene sand and gravel. The sands are separated into three hydrologic units, an upper, middle, and lower aquifer. The upper unit consists mainly of the sands of the Magothy Formation. The middle and lower units consist mainly of sands of the Raritan Formation and the Potomac Group. The thickness of the three hydrologic units are shown in figures 11, 12, and 13. The lower aquifer in the outcrop area is overlain by and hydraulically connected to the Pleistocene deposits and is a water-table aquifer in Philadelphia. The upper aquifer in the outcrop area is overlain by and hydraulically connected to the Pleistocene deposits in Camden County and is under water-table conditions.

Patterns of Ground-water Movement

Pattern before development.--The natural ground-water flow regimen for the aquifer system prior to development was influenced by topography. The topographically high areas are the natural recharge zones for much of the ground-water system in the Coastal Plain. In areas of topographic highs the prepumping potentiometric surface of each aquifer was greater than that of the aquifer below. This indicates that vertical movement of ground water was downward through the semipervious confining units into the Potomac-Raritan-Magothy aquifer system. The discharge areas were the Delaware River, and to some extent, the topographic lows or stream valleys which cut across the outcrop areas.

The potentiometric map (fig. 14) represents the average natural conditions prior to 1900 for the Potomac-Raritan-Magothy aquifer system in Camden County. Most of the data for the map are from the annual reports of the State Geologist for the period 1888-1909. Water-level data for years after 1900 were used when there was reasonable certainty that the levels were indicative of natural or prepumpage conditions. In Camden County the topographically high recharge area occurs in northern Voorhees Township and southern Cherry Hill Township (fig. 14).

Pattern after development.--The first public-water supply obtained from the Potomac-Raritan-Magothy aquifer system and the hydraulically connected Pleistocene sediments in Camden County was from the Morris well field of the City of Camden in 1898. As the Camden City area's population and industry grew its need for ground water increased. Thompson (1932) describes in detail the ground-water development of the Camden area for 1898-1927. His data for Camden County were used to determine the annual pumpage from the Potomac-Raritan-Magothy aquifer system and the hydraulically connected Pleistocene sediments for 1917-27 shown in figure 15. Withdrawals by industrial wells were estimated by the present authors to be 4 mgd for 1917-27.

The early development of water in the Potomac-Raritan-Magothy aquifer system in Camden County was centered in the vicinity of Camden City, the area containing greatest concentration of population and industry. In later years suburban development had moved southeastward. During the 1950's and 1960's many new public-supply wells were drilled in

in detail by Gill and Farlekas (written commun., 1969).

The source of water in the Potomac-Raritan-Magothy aquifer system in Camden County is therefore 1) precipitation on the outcrop area and induced recharge from streams located in the outcrop area, for example, the Delaware River, 2) recharge through the confining units, 3) water released from storage from the silts and clays of the Potomac Group and Raritan and Magothy Formations and overlying units, and 4) water from the adjacent areas as the cone of depression expands.

Aquifer Characteristics

A number of aquifer tests in the Camden County area for wells tapping the Potomac-Raritan-Magothy aquifer system have been evaluated in the past using the Theis nonequilibrium method (Ferris and others, 1962, p. 92), which assumes that the confining layers are impermeable. Results were reported in Barksdale and others (1958, p. 96-98) and Rush (1968, p. 32-33). Four of these aquifer tests have been re-evaluated (Harold Meisler, written commun., 1973) to include leaky artesian aquifer conditions proposed by Hantush (1960). Two of the four re-evaluated aquifer tests are for wells located in Camden County near the Delaware River and tap the middle aquifer of the Potomac-Raritan-Magothy aquifer system. The results of the test at the site of the Camden Water Department well 14 (CA 18) indicate that the transmissivity ranges from 2,300 to 6,700 ft^2/day (17,000-50,000 gpd/ft) with an average of 4,300 ft^2/day (32,000 gpd/ft^2). The storage coefficient ranges from 1.0×10^{-4} to 3.5×10^{-4} with an average of 1.8×10^{-4}. The re-evaluated results of the aquifer test at the Stockton pumping station (Camden Division) of the New Jersey Water Company indicate that the transmissivity ranges from 3,200 to 3,700 ft^2/day (24,000-28,000 gpd/ft) and the storage coefficient ranges from 3.3×10^{-5} to 1.5×10^{-3}.

Many large diameter high-yielding wells tap the Potomac-Raritan-Magothy aquifer system. The yields of 106 wells in Camden County (diameter 12 inches or greater) range from 455 to 1,900 gpm (gallons per minute) (table 1). The average yield for 106 wells is 1,085 gpm. The specific capacities of these wells are high, indicating a high aquifer transmissivity. The range of specific capacity of 96 wells (diameter 12 inches or greater) tapping the Potomac-Raritan-Magothy aquifer system in Camden County is 6.1 to 80 gpm/ft (gallons per minute per foot of drawdown) (table 1). The average specific capacity of these wells is 29.3

Underlined and boxed-in wells are within 3 miles of the site and draw from the aquifer of concern.

TABLES

Table 1.--Records of selected wells in Camden County and vicinity

MAP NUMBER	MUNICIPALITY	LATITUDE-LONGITUDE	OWNER	LOCAL WELL NUMBER	DATE DRILLED (YEAR)	ALTITUDE OF LSD (FT)	CASING DEPTH (FT)	WELL DEPTH (FT)
			ATLANTIC COUNTY					
HA-1	HAMMONTON TOWN	393[illegible]074[illegible]3.1	ATLANTIC C EXPR HAMMONTON 1		1966	37	220	230
			BURLINGTON COUNTY					
EV-1	EVESHAM TWP	395[illegible]074[illegible]0.1	EVESHAM M U A	EMUA 3	1967	70	288	334
EV-2	EVESHAM TWP	395[illegible]074[illegible]8.1	ATRON T ROBERTS	ROBERTS 2	1957	43	322	375
EV-3	EVESHAM TWP	395[illegible]074[illegible]3.1	EVESHAM M U A	EMUA 2	1963	115	405	435
EV-4	EVESHAM TWP	395[illegible]074[illegible]4.1	EVESHAM M U A	EMUA 1	1956	99	359	389
EV-5	EVESHAM TWP	395[illegible]074[illegible]2.1	EVESHAM TWP # 0	ETWD 1	1937	115	--	212
EV-6	EVESHAM TWP	395[illegible]074[illegible]5.1	EVESHAM M U A	TEST WELL 11	1964	110	389	399
EV-7	EVESHAM TWP	395[illegible]074[illegible]5.2	EVESHAM M U A	EMUA 4	1970	110	496	500
EV-8	EVESHAM TWP	395[illegible]074[illegible]3.1	US ARMY	CONTROL AREA	1956	84	138	158
MS-1	MAPLE SHADE TWP	395[illegible]074[illegible]7.1	MAPLE SHADE # 0	MSWD 4	1955	10	211	272
MS-2	MAPLE SHADE TWP	395[illegible]074[illegible]1.1	MAPLE SHADE # 0	MSWD 5	1961	20	410	446
MS-3	MAPLE SHADE TWP	395[illegible]074[illegible]4.1	MAPLE SHADE # 0	MSWD 1	--	35	413	443
MS-4	MAPLE SHADE TWP	395[illegible]074[illegible]2.2	MAPLE SHADE # 0	MSWD 6	1965	40	173	204
MS-5	MAPLE SHADE TWP	395[illegible]074[illegible]3.1	MAPLE SHADE # 0	MSWD 7	1966	29	140	195
ML-1	MEDFORD LAKES MUA	395[illegible]074[illegible]1.1	[illegible]100	--	1956	75	--	260
ML-2	MEDFORD LAKES MUA	395[illegible]074[illegible]9.1	C S CAMPANELLI	--	1966	100	--	310
ML-3	MEDFORD LAKES MUA	395[illegible]074[illegible]4.1	THOMAS DICKINSON 1		1969	120	--	320
ME-1	MEDFORD TWP	395[illegible]074[illegible]2.1	US GEOL SURVEY	MEDFORD 4	1967	72	1125	1145
ME-2	MEDFORD TWP	395[illegible]074[illegible]8.1	US GEOL SURVEY	MEDFORD 5	1967	70	740	750
ME-3	MEDFORD TWP	395[illegible]074[illegible]6.1	US GEOL SURVEY	MEDFORD 1	1963	70	490	510
ME-4	MEDFORD TWP	395[illegible]074[illegible]2.1	MEDFORD # C	MWC 3	1957	48	506	536
ME-5	MEDFORD TWP	395[illegible]074[illegible]9.1	MEDFORD # C	MWC 2	1968	45	506	534
ME-6	MEDFORD TWP	395[illegible]074[illegible]0.1	PARSAMPUTT	1	1968	50	--	130
ME-7	MEDFORD TWP	395[illegible]074[illegible]3.1	LAKES WATER CO	LWC 3	1968	55	523	544
ME-8	MEDFORD TWP	395[illegible]074[illegible]7.1	MEDFORD LAUND	LAUNDROMAT 1	1967	30	193	209
ME-9	MEDFORD TWP	395149N0745152.1	LAKES # C	2	1950	52	180	200
ME-10	MEDFORD TWP	395112N0745123.1	TAUNTON LAKE WC 1		1950	57	230	252
ME-11	MEDFORD TWP	395100N0745109.1	ROBERT DICKSON	--	1951	66	222	242
ME-12	MEDFORD TWP	395029N0744756.1	GEORGE BARON	--	1952	110	320	340
ME-13	MEDFORD TWP	395019N0745051.1	# O FREEMAN	--	1955	65	260	275
MO-1	MOORESTOWN TWP	395915N0745554.1	MOORESTOWN T WD	TEST HOLE 1-66	1966	68	320	340
MO-2	MOORESTOWN TWP	395838N0745545.1	CAMPBELL SOUP	CAMPBELL 1	1956	40	242	258
MO-3	MOORESTOWN TWP	395829N0745514.1	MOORESTOWN T WD	TEST HOLE 1-68	1968	35	315	375
MO-4	MOORESTOWN TWP	395751N0745532.1	LAYNE NY CO	LAYNE 1	1963	70	--	388
MO-5	MOORESTOWN TWP	395706N0745807.1	MOORESTOWN T WD	MTWD 5	1963	35	248	288
MO-6	MOORESTOWN TWP	395702N0745807.2	MOORESTOWN T WD	MTWD 6	1963	47	248	288
MT-1	MOUNT LAUREL TWP	395507N0745643.1	MT LAUREL # CO	MLWC 1	1961	20	558	569
MT-2	MOUNT LAUREL TWP	395455N0745752.1	EVA DIAMOND	--	1951	73	190	202
MT-3	MOUNT LAUREL TWP	395540N0744723.1	RALPH VASTURO	--	1950	68	100	119
MT-4	MOUNT LAUREL TWP	395552N0745703.1	NJ TURNPIKE AUTH	INTERCHANGE 4	1961	35	137	147
SM-1	SHAMONG TWP	394422N0744309.1	US GEOL SURVEY	ATSION 1	1963	46	240	260
SM-2	SHAMONG TWP	394422N0744309.2	US GEOL SURVEY	ATSION 2	1963	49	63	65
SM-3	SHAMONG TWP	394422N0744309.3	US GEOL SURVEY	ATSION 3	1963	47	14	17
			CAMDEN COUNTY					
AU-1	AUDUBON BORO	395327N0745654.1	PUBLIC SERV E&G	PSEGC 1	1953	25	120	130
AU-2	AUDUBON BORO	395326N0745654.1	D CORVELLI	--	1949	55	183	191
BA-1	BARRINGTON BORO	395522N0745303.1	NJ WATER CO	TEST WELL T 1	1968	70	482	492
BA-2	BARRINGTON BORO	395522N0745303.2	NJ WATER CO	TEST WELL T 2	1968	70	350	360
BA-3	BARRINGTON BORO	395146N0745654.1	OWENS CORNING	CORNING 1	1956	50	285	318
BL-1	BELLMAWR BORO	395222N0745932.1	BELLMAWR # 0	BMWD 1	1962	31	111	160
BL-2	BELLMAWR BORO	395221N0745933.1	BELLMAWR M # 0	BMWD 3	1956	31	331	356
BL-3	BELLMAWR BORO	395219N0745941.1	BELLMAWR # # 0	BMWD 2	1962	31	111	159
BL-4	BELLMAWR BORO	395151N0745933.1	BELLMAWR M # 0	BMWD 4	1965	42	330	557
BA-1	BERLIN BORO	394738N0745614.1	BERLIN WATER D	BWD 9	1955	150	550	713
BA-2	BERLIN BORO	394738N0745614.2	BERLIN WATER D	BWD 10	1967	145	645	713
BA-3	BERLIN BORO	394738N0745614.3	BERLIN WATER D	BWD 1	1923	145	299	339
BA-4	BERLIN BORO	394738N0745614.4	BERLIN WATER D	BWD 5	1950	150	57	82
BA-5	BERLIN BORO	394738N0745614.5	BERLIN WATER D	BWD 8	1952	150	310	350
BA-6	BERLIN BORO	394705N0745644.1	OWENS CORNING	1	1951	160	410	440
BA-7	BERLIN BORO	394653N0745543.1	D CHILLEMI	--	1951	160	68	78
BA-8	BERLIN BORO	394644N0745539.1	GREGORY PONRAL	--	1954	155	40	60
BT-1	BERLIN TWP	394816N0745512.1	ANTHONY TILLEY	--	1952	175	34	40
BR-1	BROOKLAWN BORO	395244N0750727.1	BROOKLAWN B # 0	BRWD 2	1956	13	133	157
BR-2	BROOKLAWN BORO	395244N0750727.2	BROOKLAWN B # 0	BRWD 3	1961	13	307	328
BR-3	BROOKLAWN BORO	395243N0750726.1	BROOKLAWN H # 0	BRWD NEW WELL	1967	13	288	321
BR-4	BROOKLAWN BORO	395242N0750725.1	BROOKLAWN H # 0	LEGION	1962	13	120	141
CA-1	CAMDEN CITY	395732N0750532.1	NJ WATER CO	CAMDEN DIV 27	1924	10	102	135
CA-2	CAMDEN CITY	395728N0750520.1	NJ WATER CO	CAMDEN DIV 48	1954	10	122	144
CA-3	CAMDEN CITY	395726N0750518.1	NJ WATER CO	CAMDEN DIV 50	1958	10	139	170
CA-4	CAMDEN CITY	395725N0750521.1	NJ WATER CO	CAMDEN DIV 49	1955	9	137	169
CA-5	CAMDEN CITY	395722N0750523.1	NJ WATER CO	CAMDEN DIV 46	1950	9	148	178
CA-6	CAMDEN CITY	395722N0750514.1	NJ WATER CO	CAMDEN DIV 10	1932	11	--	150
CA-7	CAMDEN CITY	395720N0750513.1	NJ WATER CO	CAMDEN DIV 51	1965	13	140	192
CA-8	CAMDEN CITY	395719N0750517.1	NJ WATER CO	CAMDEN DIV 45	1950	10	142	173
CA-9	CAMDEN CITY	395718N0750513.1	NJ WATER CO	CAMDEN DIV 47	1953	20	159	174
CA-10	CAMDEN CITY	395718N0750507.1	H KOMNSTAMM CO	6	1967	30	163	183
CA-11	CAMDEN CITY	395716N0750608.1	CAMDEN CITY # 0	CITY 15	1954	8	116	136
CA-12	CAMDEN CITY	395716N0750507.1	H KOMNSTAMM CO	3	1954	30	116	136
CA-13	CAMDEN CITY	395716N0750507.2	H KOMNSTAMM CO	4	1959	30	133	158
CA-14	CAMDEN CITY	395716N0750507.3	H KOMNSTAMM CO	5	1960	30	112	138
CA-15	CAMDEN CITY	395715N0750519.1	NJ WATER CO	CAMDEN DIV 52	1965	18	--	200
CA-16	CAMDEN CITY	395715N0750517.1	NJ WATER CO	CAMDEN DIV 44	1950	20	147	198
CA-17	CAMDEN CITY	395711N0750534.1	NJ WATER CO	36 08S 27TH ST	1932	50	185	202
CA-18	CAMDEN CITY	395707N0750615.1	CAMDEN CITY W D	CITY 14	1953	8	105	145

Table 1.--Records of selected wells in Camden County and vicinity--Continued

MAP NUMBER	LENGTH OF WELL OPEN TO AQUIFER (FEET)	DEPTH TO CONSOLIDATED ROCK (FT)	CASING DIAMETER (INCHES)	WATER LEVEL (FT)	DATE WATER LEVEL MEASURED	YIELD (GPM)	DRAWDOWN (FT)	SPECIFIC CAPACITY	PUMPING PERIOD (HOURS)	USE OF WATER	MAJOR AQUIFER
ATLANTIC COUNTY											
HA-1	10	--	6	6	6-64	91	72	1.3	12	H	TH Kw
BURLINGTON COUNTY											
BV-1	45	--	10	104	6-67	508	54	9.5	5	D	KJ MR
BV-2	63	--	6	109	11-57	750	90	8.3	--	D	KJ MR
BV-3	30	--	10	135	10-63	800	45	17.8	8	D	KJ MR
BV-4	20	--	4	41	9-56	517	166	3.1	--	D	KJ MR
BV-5	--	--	6	42	--	100	--	--	--	D	KJ MR
BV-6	10	--	6	109	12-57	109	12	9.1	--	D	KJ ET
BV-7	36	--	10	172	9-70	1012	41	24.7	8	D	KJ MR
BV-8	20	--	4	41	9-56	200	43	4.7	--	D	KJ MR
MS-1	41	--	12	119	12-55	1020	42	24.3	48	D	KJ MR
MS-2	85	494	4	45	9-61	1001	54	18.5	8	D	KJ MR
MS-3	50	--	--	53	--	131	--	--	--	D	KJ MR
MS-4	25	--	--	57	12-63	1034	54	19.0	8	D	KJ MR
MS-5	55	--	4	30	7-66	500	50	10.0	8	D	KJ MR
ML-1	--	--	4	45	8-66	70	--	--	1	D	KJ MR
ML-2	--	--	4	75	10-66	100	--	--	1	D	KJ MR
ML-3	--	--	4	70	7-64	100	--	--	1	D	KJ MR
ME-1	--	--	4	45	8-66	--	--	--	--	D	KJ MR
ME-2	10	--	4	82	8-66	--	--	--	--	D	KJ MR
ME-3	30	--	4	75	12-63	--	--	--	--	D	KJ MR
ME-4	31	--	4	50	--	517	90	5.8	--	D	KJ MR
ME-5	30	--	4	74	10-66	524	35	15.0	8	D	KJ MR
ME-6	--	--	4	69	12-66	100	--	--	1	D	KJ MR
ME-7	21	--	4	43	10-66	307	78	3.9	8	D	KJ MR
ME-8	15	--	4	--	--	--	--	--	--	D	KJ MR
ME-9	20	--	4	20	1-50	100	--	--	8	D	KJ MR
ME-10	--	--	6	25	11-50	300	--	--	--	D	KJ MR
ME-11	20	--	4	20	1-51	100	--	--	--	D	KJ MR
ME-12	20	--	4	50	5-52	50	--	--	--	D	KJ MR
ME-13	15	--	4	20	1-55	40	--	--	--	D	KJ MR
MO-1	20	--	4	90	11-66	530	--	--	--	D	KJ MR
MO-2	21	--	10	41	10-58	560	54	10.4	8	D	KJ MR
MO-3	40	--	4	50	5-66	350	--	--	--	D	KJ MR
MO-4	--	--	--	--	--	--	--	--	--	D	KJ MR
MO-5	40	--	12	67	11-63	805	36	22.4	8	D	KJ MR
MO-6	40	--	12	66	10-63	1000	55	18.2	8	D	KJ MR
MT-1	31	594	4	36	5-61	548	78	7.0	8	D	KJ MR
MT-2	10	--	4	48	7-61	10	6	1.7	--	D	KJ ET
MT-3	19	--	4	35	--	10	--	--	--	D	KJ ET
MT-4	10	--	3	39	5-61	25	40	0.6	16	D	KJ MR
SM-1	20	--	6	15	7-63	--	--	--	--	D	TE MA
SM-2	5	--	1	5	10-63	--	--	--	--	D	AA CP
SM-3	3	--	1	7	12-63	--	--	--	--	D	AA CP
CAMDEN COUNTY											
AH-1	10	--	4	40	1-53	50	--	--	8	N	KJ MR
AH-2	4	--	4	32	7-64	30	18	1.7	--	D	KJ MR
BA-1	10	510	6	111	8-58	130	21	6.2	24	D	KJ MR
BA-2	10	510	4	115	8-58	40	6	6.7	50	D	KJ MR
BA-3	30	--	12	99	2-58	1045	43	24.3	8	N	KJ MR
BL-1	49	--	12	42	7-62	1300	18	55.6	36	P	KJ MR
BL-2	25	--	4	42	8-58	1001	71	14.1	8	P	KJ MR
BL-3	48	--	12	45	12-62	900	12	41.7	24	P	KJ MR
BL-4	59	570	12	127	8-58	1016	25	40.6	24	P	KJ MR
BA-1	53	--	8	155	7-59	1000	99	10.1	8	P	KJ MR
BA-2	42	--	6	--	--	1012	69	14.7	8	P	KJ MR
BA-3	40	--	4	73	12-23	155	--	--	--	P	KJ MR
BA-4	15	--	8	--	--	365	--	--	--	P	KJ MR
BA-5	50	--	4	40	8-58	450	138	3.3	8	P	AA CP
BA-6	30	--	6	39	8-61	115	63	1.8	8	P	KJ MR
BA-7	10	--	3	15	12-61	30	1	30.0	8	P	KJ MR
BA-8	20	--	4	8	8-58	50	--	--	--	P	AA CP
BT-1	5	--	4	21	8-58	--	--	--	--	P	AA CP
BW-1	34	--	10	16	2-60	455	16	28.4	--	P	AA CP
BW-2	21	328	6	11	8-61	500	33	15.2	--	P	KJ MR
BW-3	33	--	10	70	--	--	--	--	--	P	KJ MR
BW-4	25	--	12	22	8-58	455	14	25.3	8	P	KJ MR
CA-1	33	--	14	21	8-24	1050	22	47.7	--	P	KJ MR
CA-2	32	144	12	45	7-34	1412	54	26.1	2	--	KJ MR
CA-3	31	--	12	44	8-58	1000	52	19.2	8	P	KJ MR
CA-4	32	169	12	44	8-55	--	--	--	--	P	KJ MR
CA-5	30	--	12	35	11-50	1400	55	25.5	8	P	KJ MR
CA-6	--	--	8	10	8-33	--	--	--	--	P	KJ MR
CA-7	51	193	16	36	1-63	1471	74	19.9	5	P	KJ MR
CA-8	31	--	12	35	8-58	700	65	10.8	--	P	KJ MR
CA-9	25	--	12	34	7-53	1012	45	22.5	4	P	KJ MR
CA-10	20	--	8	40	2-67	200	--	--	48	N	KJ MR
CA-11	20	148	14	37	8-34	1000	70	14.3	8	P	KJ MR
CA-12	20	--	6	50	12-54	150	--	--	5	N	KJ MR
CA-13	25	--	6	40	8-59	250	20	12.5	8	N	KJ MR
CA-14	26	--	6	30	6-58	200	20	10.0	4	N	KJ MR
CA-15	--	200	16	50	7-65	1404	--	--	5	P	KJ MR
CA-16	51	--	12	61	8-58	1400	26	53.8	3	P	KJ MR
CA-17	10	--	6	57	8-62	--	--	--	--	P	KJ MR
CA-18	40	164	18	35	2-53	1000	52	19.2	8	D	KJ MR

Table 1.--Records of selected wells in Camden County and vicinity--Continued

MAP NUMBER	MUNICIPALITY	LAT-LONG	OWNER	LOCAL WELL NUMBER	DATE DRILLED (YEAR)	ALTITUDE OF LSD (FT)	CASING DEPTH (FT)	WELL DEPTH (FT)
			CAMDEN COUNTY					
CA-19	CAMDEN CITY	395706N0750553.1	CAMDEN CITY W D	CITY 16	1954	23	149	179
CA-20	CAMDEN CITY	395659N0750610.1	CAMDEN CITY W D	CITY 9	1957	9	116	146
CA-21	CAMDEN CITY	395659N0750610.2	CAMDEN CITY W D	TEST WELL 1950	1950	5	129	150
CA-22	CAMDEN CITY	395659N0750610.3	CAMDEN CITY W D	CITY 9-1924	1924	9	106	146
CA-23	CAMDEN CITY	395652N0750607.1	CAMDEN CITY W D	CITY 10	1935	10	125	158
CA-24	CAMDEN CITY	395649N0750743.1	ESTERBROOK PEN	ESTERBROOK OBS	--	8	--	300
CA-25	CAMDEN CITY	395640N0750622.1	CAMDEN CITY W D	CITY 1-1940	1940	5	135	168
CA-26	CAMDEN CITY	395638N0750622.1	CAMDEN CITY W D	CITY 1A	1953	10	135	170
CA-27	CAMDEN CITY	395638N0750622.2	CAMDEN CITY W D	CITY 1-1922	1922	5	146	174
CA-28	CAMDEN CITY	395617N0750710.1	CAMDEN CITY W D	CITY 12	1945	23	136	166
CA-29	CAMDEN CITY	395615N0750633.1	CAMDEN CITY W D	CITY 5N	1963	22	134	169
CA-30	CAMDEN CITY	395614N0750633.2	CAMDEN CITY W D	CITY 5-1937	1937	22	142	172
CA-31	CAMDEN CITY	395614N0750633.1	CAMDEN CITY W D	CITY 5-1928	1928	22	152	171
CA-32	CAMDEN CITY	395604N0750735.1	PUBLIC SERV E G &	REPLACEMENT	1954	5	118	145
CA-33	CAMDEN CITY	395603N0750736.1	PUBLIC SERV E-G	PSEGC 8	1955	4	119	145
CA-34	CAMDEN CITY	395602N0750744.1	PUBLIC SERV E-G	PSEGC 7	1947	4	116	145
CA-35	CAMDEN CITY	395557N0750629.1	CAMDEN CITY W D	CITY 3A	1953	15	91	115
CA-36	CAMDEN CITY	395557N0750629.2	CAMDEN CITY W D	CITY 3-1934	1934	15	91	113
CA-37	CAMDEN CITY	395557N0750629.3	CAMDEN CITY W D	CITY 3-1922	1922	15	95	110
CA-38	CAMDEN CITY	395552N0750535.1	CAMDEN CITY W D	CITY 13	1953	30	185	225
CA-39	CAMDEN CITY	395551N0750725.1	PUBLIC SERV E-G	PSEGC 14	1950	5	120	144
CA-40	CAMDEN CITY	395550N0750729.1	CAMDEN CITY W D	CITY 2B	1953	8	111	135
CA-41	CAMDEN CITY	395546N0750533.1	CAMDEN CITY W D	CITY 17	1954	34	230	255
CA-42	CAMDEN CITY	395541N0750622.1	CAMDEN CITY W D	CITY 4	1950	41	131	156
CA-43	CAMDEN CITY	395541N0750622.2	CAMDEN CITY W D	CITY 4-1935	1935	40	121	156
CA-44	CAMDEN CITY	395541N0750622.3	CAMDEN CITY W D	CITY 4-1922	1922	40	--	--
CA-45	CAMDEN CITY	395540N0750742.1	CAMDEN CITY W D	CITY 8	1928	6	150	175
CA-46	CAMDEN CITY	395540N0750742.2	CAMDEN CITY W D	CITY 8A	1953	6	89	124
CA-47	CAMDEN CITY	395539N0750630.1	W JERSEY HOSP	W JERSEY HOSP1	1958	30	119	140
CA-48	CAMDEN CITY	395539N0750541.1	OLDL HOSPITAL	STAND BY WELL	1963	30	241	258
CA-49	CAMDEN CITY	395534N0750724.1	GALLAGHERS WHSE	EVRSN LVRNG 1	1929	10	--	170
CA-50	CAMDEN CITY	395532N0750720.1	GALLAGHERS WHSE	EVRSN LVRNG 2	1933	10	145	171
CA-51	CAMDEN CITY	395530N0750719.1	GALLAGHERS WHSE	EVRSN LVRNG 5	1929	10	--	203
CA-52	CAMDEN CITY	395528N0750538.1	A N STOLLWRECK	2	1950	28	111	131
CA-53	CAMDEN CITY	395527N0750646.1	CAMDEN CITY W D	CITY 6N	1948	14	111	136
CA-54	CAMDEN CITY	395527N0750646.2	CAMDEN CITY W D	CITY 6-1928	1928	14	111	135
CA-55	CAMDEN CITY	395523N0750729.1	CAMDEN CITY	SEWAGE PLANT 1	1954	9	163	193
CA-56	CAMDEN CITY	395512N0750640.1	CAMDEN CITY W D	CITY 11	1942	13	124	154
CA-57	CAMDEN CITY	395502N0750655.1	CAMDEN BREWERY	--	--	18	160	180
CA-58	CAMDEN CITY	395457N0750641.1	CAMDEN CITY W D	CITY 7	1945	21	126	160
CA-59	CAMDEN CITY	395457N0750641.2	CAMDEN CITY W D	CITY 7-1928	1928	21	126	164
CA-60	CAMDEN CITY	395457N0750640.1	CAMDEN CITY W D	CITY 7N	1966	21	123	163
CA-61	CAMDEN CITY	395455N0750716.1	SO JRSY PORT CM	NY SHIP 7	1942	12	187	229
CA-62	CAMDEN CITY	395449N0750716.1	SO JRSY PORT CM	NY SHIP 6	1941	12	119	225
CA-63	CAMDEN CITY	395447N0750711.1	SO JRSY PORT CM	NY SHIP 5A	1940	12	87	104
CA-64	CAMDEN CITY	395435N0750720.1	SO JRSY PORT CM	NY SHIP PW 1	1956	12	50	124
CA-65	CAMDEN CITY	395427N0750606.1	CAMDEN CITY W D	WATER WORKS T1	1942	15	247	300
CH-1	CHERRY HILL TWP	395621N0745840.1	ANTHONY MALADRA	--	1955	60	--	115
CH-2	CHERRY HILL TWP	395616N0750027.1	NJ WATER CO	COLUMBIA 22	1960	39	371	453
CH-3	CHERRY HILL TWP	395615N0750027.1	NJ WATER CO	COLUMBIA 24	1961	34	153	167
CH-4	CHERRY HILL TWP	395613N0750052.1	JERRY SCHAEFER	1	1965	45	100	105
CH-5	CHERRY HILL TWP	395612N0750142.1	RADIO CORP AMER	RCA 1	1955	128	220	--
CH-6	CHERRY HILL TWP	395606N0750148.1	GS RACING ASSCT	CHRY HLL INN 1	1954	80	--	179
CH-7	CHERRY HILL TWP	395606N0750148.2	GS RACING ASSCT	CHRY HLL INN 2	1967	60	148	172
CH-8	CHERRY HILL TWP	395603N0750031.1	NJ WATER CO	COLUMBIA 31	1967	45	376	427
CH-9	CHERRY HILL TWP	395556N0745924.1	M HOLZER	--	1953	75	178	183
CH-10	CHERRY HILL TWP	395530N0750301.1	E H ELLIS SON	1	1949	23	158	168
CH-11	CHERRY HILL TWP	395514N0750213.1	GARDEN STATE PK	RACE TRACK	--	25	128	158
CH-12	CHERRY HILL TWP	395511N0750232.1	MIDELL AND SONS	--	1953	27	125	135
CH-13	CHERRY HILL TWP	395502N0750221.1	N J NATIONAL GO	1	1956	10	97	111
CH-14	CHERRY HILL TWP	395455N0745925.1	NJ WATER CO	KINGSTON 25	1961	44	309	367
CH-15	CHERRY HILL TWP	395455N0745925.2	NJ WATER CO	KINGSTON 28	1964	44	175	237
CH-16	CHERRY HILL TWP	395455N0745924.1	NJ WATER CO	KINGSTON 27	1963	40	365	417
CH-17	CHERRY HILL TWP	395452N0750035.1	A J OSTERTAG	1	1953	55	87	115
CH-18	CHERRY HILL TWP	395442N0750103.1	NJ WATER CO	ELLISBURG 13	1960	39	491	527
CH-19	CHERRY HILL TWP	395441N0750104.1	NJ WATER CO	ELLISBURG 16	1957	39	187	220
CH-20	CHERRY HILL TWP	395438N0750107.1	NJ WATER CO	ELLISBURG 23	1960	32	318	375
CH-21	CHERRY HILL TWP	395422N0745641.1	DEER PARK FIRE	CO 1	1954	70	252	258
CH-22	CHERRY HILL TWP	395419N0745721.1	FRANK POWERS	--	1949	72	310	320
CH-23	CHERRY HILL TWP	395409N0750048.1	P A VATTER	--	1953	64	224	234
CH-24	CHERRY HILL TWP	395409N0745957.1	ROBERT COLEMAN	--	195_	17	98	108
CH-25	CHERRY HILL TWP	395406N0745841.1	ARNOLD PALMER	DRIVING RANGE	1964	60	275	285
CH-26	CHERRY HILL TWP	395356N0745708.1	NJ WATER CO	OLD ORCHARD A	1967	71	743	748
CH-27	CHERRY HILL TWP	395356N0745708.2	NJ WATER CO	OLD ORCHARD B	1967	71	328	342
CH-28	CHERRY HILL TWP	395356N0745708.3	NJ WATER CO	OLD ORCHARD C	1967	71	487	500
CH-29	CHERRY HILL TWP	395356N0745708.4	NJ WATER CO	OLD ORCHARD 36	1968	8	299	349
CH-30	CHERRY HILL TWP	395356N0745708.5	NJ WATER CO	OLD ORCHARD 37	1968	6	454	488
CH-31	CHERRY HILL TWP	395356N0745708.6	NJ WATER CO	OLD ORCHARD 38	1968	72	443	493
CH-32	CHERRY HILL TWP	395331N0745920.1	A B ROSS	1	1950	100	125	135
CH-33	CHERRY HILL TWP	395321N0745617.1	EUGENE MILLER	1	1954	92	360	370

Table 1.--Records of selected wells in Camden County and vicinity--Continued

MAP NUMBER	LENGTH OF WELL OPEN TO AQUIFER (FEET)	DEPTH TO CONSOLI-DATED ROCK (FT)	CASING DIAM-ETER (IN)	WATER LEVEL (FT)	DATE WATER LEVEL MEASURED	YIELD (GPM)	DRAW DOWN (FT)	SPECIFIC CAPACITY	PUMPING PERIOD (HOURS)	USE OF WATER	MAJOR AQUIFER
					CAMDEN COUNTY						
CA-19	30	--	14	50	12-54	1130	53	21.3	8	P	KJ MR
CA-20	30	146	18	46	11-57	1020	53	19.2	--	P	KJ MR
CA-21	21	166	8	23	7-56	300	57	5.3	--	U	KJ MR
CA-22	40	146	26	15	3-24	1420	72	19.7	--	P	KJ MR
CA-23	30	158	18	57	11-57	1020	32	31.9	--	P	KJ MR
CA-24	--	--	6	--	--	--	--	--	--	U	#G
CA-25	32	--	18	--	--	--	--	--	--	P	KJ MR
CA-26	35	--	18	42	12-53	1000	54	18.5	8	P	KJ MR
CA-27	39	--	26	12	10-22	1050	67	15.7	--	P	KJ MR
CA-28	30	--	16	32	-45	857	74	11.6	--	P	KJ MR
CA-29	35	--	18	58	10-63	1000	32	31.2	--	P	KJ MR
CA-30	30	--	18	--	--	--	--	--	--	P	KJ MR
CA-31	19	--	26	31	5-28	1100	37	29.7	--	P	KJ MR
CA-32	32	--	8	38	12-54	350	25	14.0	24	N	KJ MR
CA-33	26	--	--	--	--	--	--	--	--	N	KJ MR
CA-34	29	--	--	--	--	--	--	--	--	N	KJ MR
CA-35	25	--	18	37	12-55	1000	46	21.7	8	P	KJ MR
CA-36	22	--	18	--	--	--	--	--	--	P	KJ MR
CA-37	24	--	26	15	5-22	1160	55	21.1	--	P	KJ MR
CA-38	40	--	18	46	5-53	1000	24	41.7	--	P	KJ MR
CA-39	26	--	10	31	5-50	506	34	14.9	12	N	KJ MR
CA-40	25	190	18	41	12-54	1000	46	21.7	8	P	KJ MR
CA-41	35	--	18	54	7-58	1250	32	39.1	8	P	KJ MR
CA-42	25	--	18	77	11-57	1000	27	37.0	--	P	KJ MR
CA-43	35	--	18	56	9-35	1200	34	35.3	--	P	KJ MR
CA-44	--	--	--	--	--	--	--	--	--	P	K3 MR
CA-45	25	--	18	21	9-28	1085	52	20.9	--	P	KJ MR
CA-46	35	--	18	12	7-53	1000	30	33.3	8	P	KJ MR
CA-47	21	--	8	52	12-58	205	58	3.5	8	T	KJ MR
CA-48	21	--	8	68	9-63	275	11	25.0	4	T	KJ MR
CA-49	--	--	4	--	--	150	--	--	--	N	KJ MR
CA-50	26	--	8	--	--	300	--	--	--	N	KJ MR
CA-51	--	--	12	--	--	--	--	--	--	N	KJ MR
CA-52	20	--	8	52	2-50	210	8	26.2	3	N	KJ MR
CA-53	25	--	18	39	2-48	1012	31	32.6	8	P	KJ MR
CA-54	25	--	26	18	9-28	1180	47	25.1	--	P	KJ MR
CA-55	--	201	10	36	1-54	907	--	--	--	U	KJ MR
CA-56	30	--	16	32	9-42	1005	30	33.5	8	P	KJ MR
CA-57	20	--	--	--	--	--	--	--	--	N	KJ MR
CA-58	40	--	18	49	7-45	775	47	16.5	--	P	KJ MR
CA-59	38	--	26	29	9-28	1000	38	26.3	--	P	KJ MR
CA-60	40	--	18	50	5-66	1023	21	48.7	8	P	KJ MR
CA-61	42	--	12	35	5-43	1005	57	17.6	--	U	KJ MR
CA-62	26	--	10	28	3-41	830	81	10.2	--	N	KJ MR
CA-63	17	--	8	28	4-41	533	37	14.4	--	U	KJ MR
CA-64	62	--	16	17	1-56	--	56	--	40	N	KJ MR
CA-65	--	--	6	27	5-42	--	--	--	--	U	KJ MR
CH-1	--	--	--	55	1-55	15	--	--	2	H	KJ MV
CH-2	82	--	12	57	3-60	1067	49	21.8	8	P	KJ MR
CH-3	14	--	12	26	--	1051	44	23.9	8	P	KJ MR
CH-4	5	--	4	50	1-65	20	10	2.0	5	H	KJ MR
CH-5	--	--	6	48	--	50	--	--	4	N	KJ MR
CH-6	25	--	8	92	9-54	400	43	9.3	10	U	KJ MR
CH-7	24	--	12	--	--	--	--	--	--	I	K3 MR
CH-8	47	--	12	85	1-67	1030	57	18.1	24	--	KJ MR
CH-9	5	--	4	45	3-53	15	10	1.5	2	H	KJ MR
CH-10	10	--	5	25	4-49	15	20	0.7	4	N	KJ MR
CH-11	30	--	--	--	--	--	--	--	--	I	KJ MR
CH-12	10	--	6	25	3-53	60	--	--	6	H	KJ MR
CH-13	5	--	6	36	5-56	150	14	10.7	8	T	KJ MR
CH-14	58	528	12	69	9-61	1000	--	--	8	P	KJ MR
CH-15	26	--	12	62	10-64	857	70	12.2	8	P	KJ MR
CH-16	52	531	12	73	12-63	812	70	11.6	8	P	KJ MR
CH-17	--	--	8	74	10-53	25	--	--	2	H	KJ MV
CH-18	36	--	10	54	4-53	1200	50	24.0	8	P	KJ MR
CH-19	33	--	12	59	11-57	1000	62	16.1	5	P	KJ MR
CH-20	57	--	12	62	5-60	1001	34	29.4	8	P	KJ MR
CH-21	6	--	4	85	11-54	20	15	1.3	2	H	KJ MR
CH-22	10	--	5	60	12-49	100	20	5.0	4	H	KJ MR
CH-23	10	--	3	80	2-53	40	--	--	4	H	KJ MR
CH-24	10	--	6	43	5-53	40	17	2.4	--	H	KJ MV
CH-25	10	--	6	90	5-64	50	10	5.0	--	I	KJ MR
CH-26	5	807	2	107	3-67	--	--	--	--	U	KJ MR
CH-27	5	--	3	110	3-67	--	--	--	--	U	KJ MR
CH-28	5	--	3	109	--	--	--	--	--	U	KJ MR
CH-29	50	--	12	123	4-68	703	116	6.1	24	P	KJ MR
CH-30	34	--	12	109	4-68	1209	47	25.7	24	P	KJ MR
CH-31	50	--	12	113	5-68	1455	49	29.7	24	P	KJ MR
CH-32	--	--	6	63	9-50	250	--	--	--	N	K3 ET
CH-33	10	--	6	92	7-54	200	18	11.1	6	H	KJ MR

Table 1.--Records of selected wells in Camden County and vicinity--Continued

MAP NUMBER	MUNICIPALITY	LAT-LONG	OWNER	LOCAL WELL NUMBER	DATE DRILLED (YEAR)	ALTITUDE OF LSD (FT)	CASING DEPTH (FT)	WELL DEPTH (FT)
			CAMDEN COUNTY					
CH-34	CHERRY HILL TWP	395308N0750015.1	NJ TURNPIKE AU	SERVICE 35-2	1951	65	231	261
CH-35	CHERRY HILL TWP	395259N0745720.1	IMMAC CONCEPTN	NOVITIATE 2	1952	65	329	339
CH-36	CHERRY HILL TWP	395254N0745822.1	F MYERS	1	1967	60	321	331
CH-37	CHERRY HILL TWP	395236N0750030.1	HUSSMAN REFRIDG	HUSSMAN	1957	67	276	306
CH-38	CHERRY HILL TWP	395229N0745722.1	HAROLD SNYDER	1	1956	127	210	215
CH-39	CHERRY HILL TWP	395229N0745712.1	NJ WATER CO	HUTTON HILL 1	1965	156	552	562
CH-40	CHERRY HILL TWP	395229N0745712.2	NJ WATER CO	HUTTON HILL 2	1965	156	137	147
CH-41	CHERRY HILL TWP	395212N0745757.1	DR E BROWN	--	1969	100	105	115
CH-42	CHERRY HILL TWP	395150N0745916.1	WOODCREST CT CL	CLUB 1	1949	92	400	420
CH-43	CHERRY HILL TWP	395150N0745913.1	WOODCREST CT CL	CLUB 2	1955	100	354	385
CL-1	CLEMENTON BORO	394832N0745915.1	CLEMENTON W D	CWD 6	1924	59	--	240
CL-2	CLEMENTON BORO	394832N0745915.2	CLEMENTON W D	CWD 7	1943	59	543	633
CL-3	CLEMENTON BORO	394832N0745915.3	CLEMENTON W D	CWD 8	1950	60	251	276
CL-4	CLEMENTON BORO	394832N0745915.4	CLEMENTON W D	ABANDON WELL	--	55	126	168
CL-5	CLEMENTON BORO	394807N0745806.1	CLEMENTON W D	CWD 9	1954	150	367	457
CO-1	COLLINGSWOOD BORO	395526N0750424.1	COLLINGSWOOD WD	CWD 5	1956	20	248	278
CO-2	COLLINGSWOOD BORO	395522N0750432.1	COLLINGSWOOD WD	CWD 3	1960	10	257	287
CO-3	COLLINGSWOOD BORO	395521N0750435.1	COLLINGSWOOD WD	CWD 4	1942	9	275	304
CO-4	COLLINGSWOOD BORO	395519N0750432.1	COLLINGSWOOD WD	CWD 2R	1960	12	248	278
CO-5	COLLINGSWOOD BORO	395515N0750436.1	COLLINGSWOOD WD	CWD 1R	1950	16	266	306
CO-6	COLLINGSWOOD BORO	395506N0750507.1	FRIENDSHIP DAIR	DAIRY 1	1955	21	143	164
CO-7	COLLINGSWOOD BORO	395426N0750514.1	COLLINGSWOOD WD	CWD 7	1965	10	224	313
CO-8	COLLINGSWOOD BORO	395426N0750514.2	COLLINGSWOOD WD	CWD 6	1965	10	218	312
GI-1	GIBBSBORO BORO	395015N0745752.1	LUCAS PAINT CO	MAIN	--	93	--	165
GI-2	GIBBSBORO BORO	395015N0745752.2	LUCAS PAINT CO	STEAM PUMP	--	93	--	160
GI-3	GIBBSBORO BORO	394955N0745852.1	KARL W FUCHS	1	1951	70	108	108
GI-4	GIBBSBORO BORO	394946N0745855.1	NJ WATER CO	GIBBSBORO OB 1	1969	70	1081	1091
GI-5	GIBBSBORO BORO	394946N0745855.2	NJ WATER CO	GIBBSBORO OB 2	1969	70	940	950
GI-6	GIBBSBORO BORO	394946N0745855.3	NJ WATER CO	GIBBSBORO OB 3	1969	70	670	680
GI-7	GIBBSBORO BORO	394944N0745717.1	JAMES E HALE	--	1952	135	138	150
GI-8	GIBBSBORO BORO	394927N0745715.1	US AIR FORCE	RADAR 1	1959	191	260	290
GI-9	GIBBSBORO BORO	394923N0745714.1	US AIR FORCE	RADAR 2	1960	193	280	310
GC-1	GLOUCESTER CITY	395359N0750654.1	GLOUCESTER C WD	GCWD 41	1965	10	226	266
GC-2	GLOUCESTER CITY	395355N0750738.1	US GEOL SURVEY	COAST GUARD 1	1966	10	162	170
GC-3	GLOUCESTER CITY	395349N0750651.1	GLOUCESTER C WD	GCWD 40	1961	10	221	262
GC-4	GLOUCESTER CITY	395348N0750654.1	GLOUCESTER C WD	GCWD 37	1947	5	84	125
GC-5	GLOUCESTER CITY	395348N0750654.2	GLOUCESTER C WD	GCWD 30	1936	13	152	175
GC-6	GLOUCESTER CITY	395348N0750654.3	GLOUCESTER C WD	GCWD 34	1942	10	--	175
GC-7	GLOUCESTER CITY	395348N0750654.4	GLOUCESTER C WD	GCWD 35	1944	5	88	122
GC-8	GLOUCESTER CITY	395348N0750654.5	GLOUCESTER C WD	GCWD 36	1946	5	85	126
GC-9	GLOUCESTER CITY	395347N0750652.1	GLOUCESTER C WD	GCWD 33	1938	14	220	240
GC-10	GLOUCESTER CITY	395347N0750651.1	GLOUCESTER C WD	GCWD 38	1949	10	279	300
GC-11	GLOUCESTER CITY	395346N0750651.1	GLOUCESTER C WD	GCWD 32	1938	11	--	175
GC-12	GLOUCESTER CITY	395345N0750653.1	GLOUCESTER C WD	GCWD 2	1929	11	140	171
GC-13	GLOUCESTER CITY	395343N0750652.1	GLOUCESTER C WD	GCWD 42	1968	15	--	306
GC-14	GLOUCESTER CITY	395332N0750734.1	HINDE AND DAUCH	JERSEY AVE 1	1945	9	241	261
GC-15	GLOUCESTER CITY	395327N0750732.1	HINDE AND DAUCH	2	1945	9	241	261
GC-16	GLOUCESTER CITY	395324N0750736.1	HINDE AND DAUCH	3	1945	7	240	260
GC-17	GLOUCESTER CITY	395322N0750757.1	MARSHAW CHEM CO	MARSHAW 4	1953	5	235	260
GC-18	GLOUCESTER CITY	395322N0750751.1	MARSHAW CHEM CO	MARSHAW 2	1951	6	221	251
GC-19	GLOUCESTER CITY	395321N0750747.1	MARSHAW CHEM CO	MARSHAW 3	1952	8	245	265
GC-20	GLOUCESTER CITY	395318N0750755.1	MARSHAW CHEM CO	MARSHAW 1	1948	5	246	266
GC-21	GLOUCESTER CITY	395315N0750617.1	H W WILSON JR	1	1954	25	102	112
GC-22	GLOUCESTER CITY	395314N0750749.1	NJ ZINC CO	1-DEEP	1945	5	230	250
GC-23	GLOUCESTER CITY	395313N0750804.1	NJ ZINC CO	3-DEEP	1958	5	223	255
GC-24	GLOUCESTER CITY	395308N0750757.1	NJ ZINC CO	2-DEEP	1954	5	245	275
GC-25	GLOUCESTER CITY	395308N0750749.1	NJ ZINC CO	5-DEEP	--	5	--	175
GC-26	GLOUCESTER CITY	395308N0750744.1	NJ ZINC CO	4-DEEP	--	5	249	279
GC-27	GLOUCESTER CITY	395252N0750823.1	GLOUCESTER C WD	GCWD 39	1958	24	161	185
GT-1	GLOUCESTER TWP	395030N0750347.1	NJ WATER CO	OTTERBROOK 29	1965	58	512	712
GT-2	GLOUCESTER TWP	395030N0750347.2	NJ WATER CO	OTTERBROOK 39	1968	60	269	349
GT-3	GLOUCESTER TWP	395029N0750344.1	NJ WATER CO	OTTERBROOK 34	1967	60	288	377
GT-4	GLOUCESTER TWP	395026N0750502.1	EDWARD MARSH	--	1952	15	--	150
GT-5	GLOUCESTER TWP	395025N0750443.1	HOWARD BROWN	--	1955	44	65	75
GT-6	GLOUCESTER TWP	395017N0750454.1	W L DOUGHERTY	--	1949	31	132	142
GT-7	GLOUCESTER TWP	395007N0750425.1	J STEZZI	--	1955	30	274	287
GT-8	GLOUCESTER TWP	394932N0750301.1	JOHN WARGO	--	1949	71	359	377
GT-9	GLOUCESTER TWP	394914N0750244.1	JOHN BISHOP	1	1967	70	160	170
GT-10	GLOUCESTER TWP	394855N0750442.1	THEISS	1	1966	65	56	71
GT-11	GLOUCESTER TWP	394841N0750354.1	EILLEN GESSWIN	--	1952	70	170	180
GT-12	GLOUCESTER TWP	394840N0750314.1	ROBERT MANNING	--	1953	104	121	131
GT-13	GLOUCESTER TWP	394839N0750410.1	MARY BENNIE	1	1950	72	166	176
GT-14	GLOUCESTER TWP	394836N0750150.1	WARNER LOMBARDI	--	1955	81	275	290
GT-15	GLOUCESTER TWP	394833N0750355.1	ARTHUR JONES	--	--	70	179	185
GT-16	GLOUCESTER TWP	394830N0750428.1	WM D CATHCART	1	1967	68	175	185
GT-17	GLOUCESTER TWP	394829N0750347.1	SUN TEMP INDUST	--	1966	80	--	388
GT-18	GLOUCESTER TWP	394820N0750445.1	GLOUC M U AUTH	TREAT PLANT	1971	20	--	358
GT-19	GLOUCESTER TWP	394815N0750356.1	AMANDUS CARLSON	--	1953	25	188	198
GT-20	GLOUCESTER TWP	394806N0750426.1	GAR ST WC-BLKWD	BLACKWOOD DIV 1	1948	20	335	386
GT-21	GLOUCESTER TWP	394806N0750426.2	GAR ST WC-BLKWD	BLACKWOOD DIV 5	1930	60	49	79

CLOSEST PUBLIC SUPPLY WELL

Table 1...Records of selected wells in Camden County and vicinity--Continued

MAP NUMBER	LENGTH OF WELL OPEN TO AQUIFER (FEET)	DEPTH TO CONSOLIDATED ROCK (FT)	CASING DIAMETER (IN)	WATER LEVEL FT	DATE WATER LEVEL MEASURED	YIELD (GPM)	DRAWDOWN FT	SPECIFIC CAPACITY	PUMPING PERIOD (HOURS)	USE OF WATER	MAJOR AQUIFER
					CAMDEN COUNTY						
CM-34	30	--	4	41	4-61	13	24	0.5	48		KJ MR
CM-35	10	--	6	41	-62	--	--	--	--		KJ MR
CM-36	10	--	4	--	4-67	100	--	--	--		KJ MR
CM-37	30	--	4	37	7-59	317	19	16.7	4		KJ MR
CM-38	5	--	4	55	8-56	100	--	--	5		KJ ET
CM-39	10	--	2	200	10-65	--	--	--	--		KJ MR
CM-40	10	--	6	88	10-65	--	--	--	--		KJ MR
CM-41	10	--	4	45	9-69	20	10	2.0	1		KJ MW
CM-42	20	--	6	100	5-69	150	9	16.7	5		KJ MR
CM-43	31	--	10	80	7-55	200	15	20.0	8		KJ MR
CL-1	--	--	4	--	--	250	--	--	--		
CL-2	30	--	6	53	4-50	500	135	3.7	--	P	KJ ET
CL-3	25	--	10	44	7-50	510	--	--	15	P	KJ MR
CL-4	42	--	4	10	5-70	--	--	--	--	P	KJ ET
CL-5	46	--	6	124	7-54	503	96	5.2	4	P	KJ MW
CO-1	30	--	12	43	2-56	1000	71	14.1	8	P	KJ ET
CO-2	30	--	12	57	-53	1000	53	15.9	8	P	KJ MR
CO-3	30	--	10	32	7-42	760	37	20.5	8	P	KJ MR
CO-4	30	300	12	57	5-50	1000	51	19.6	8	P	KJ MR
CO-5	40	--	12	54	10-49	1023	44	23.2	8	P	KJ MR
CO-6	31	--	6	41	1-55	100	38	2.6	56	N	KJ MR
CO-7	59	--	12	44	3-65	1034	18	57.4	8	N	KJ MR
CO-8	53	--	12	46	5-65	1034	13	79.5	8	N	KJ MR
GI-1	--	--	6	--	--	150	--	--	--	N	KJ MR
GI-2	--	--	--	--	--	--	--	--	--	I	KJ MW
GI-3	--	--	3	4	7-51	50	--	--	6	H	KJ MW
GI-4	10	1142	3	115	3-69	43	30	1.4	2	C	KJ MR
GI-5	10	1142	3	125	1-69	--	--	--	--	C	KJ MR
GI-6	10	1142	3	119	2-69	35	9	3.9	--	C	KJ MR
GI-7	--	--	6	42	11-52	50	--	--	--	H	KJ MR
GI-8	--	--	4	118	4-59	55	--	--	--	H	TL --
GI-9	--	--	8	130	8-60	102	--	--	--	P	KJ MW
GC-1	40	--	12	58	10-65	1034	42	24.6	24	P	KJ MW
GC-2	8	252	6	--	--	--	--	--	8	P	KJ MR
GC-3	40	--	12	58	5-61	1000	41	24.4	--	P	KJ MR
GC-4	41	--	5	--	4-61	70	--	--	4	P	KJ MR
GC-5	23	--	8	--	--	--	--	--	--	U	KJ MR
GC-6	--	--	8	--	--	--	--	--	--	U	KJ MR
GC-7	22	--	10	17	5-44	600	28	21.4	2	U	KJ MR
GC-8	24	--	8	29	1-46	400	13	30.8	2	U	KJ MR
GC-9	20	--	12	21	3-38	975	52	16.8	--	U	KJ MR
GC-10	21	--	8	16	--	300	--	--	24	U	KJ MR
GC-11	--	--	8	--	--	--	--	--	--	U	KJ MR
GC-12	30	--	8	33	4-53	200	32	6.2	--	U	KJ MR
GC-13	--	--	10	--	--	--	--	--	--	P	KJ MR
GC-14	20	--	10	--	--	--	--	--	--	N	KJ MR
GC-15	20	--	10	--	--	--	--	--	--	N	KJ MR
GC-16	20	--	10	--	--	--	--	--	--	N	KJ MR
GC-17	25	--	10	--	--	--	--	--	--	N	KJ MR
GC-18	30	--	10	55	3-53	566	22	25.7	--	N	KJ MR
GC-19	20	--	10	77	3-51	578	24	24.1	8	N	KJ MR
GC-20	20	--	10	57	4-52	530	26	20.4	8	U	KJ MR
GC-21	10	--	10	54	7-48	560	45	12.4	8	U	KJ MR
GC-22	20	--	3	33	4-53	25	--	--	8	N	KJ MR
GC-23	30	260	--	34	-45	600	25	24.0	--	N	KJ MR
GC-24	30	--	10	64	12-57	600	24	25.0	8	N	KJ MR
GC-25	--	--	10	49	7-54	600	29	20.7	8	N	KJ MR
GC-26	30	285	--	--	--	--	--	--	--	N	KJ MR
GC-27	24	--	10	57	--	600	35	17.1	8	N	KJ MR
GT-1	89	--	10	111	1-65	1010	46	10.9	48	U	KJ MR
GT-2	80	--	12	112	4-68	1529	32	31.8	5	P	KJ MR
GT-3	42	--	12	108	1-67	1000	54	28.3	24	P	KJ MR
GT-4	--	--	4	5	10-52	25	35	28.6	8	P	KJ MR
GT-5	6	--	4	12	1-55	60	--	--	--	H	KJ MV
GT-6	10	--	3	20	4-49	25	4	15.0	--	H	KJ ET
GT-7	10	--	3	47	1-55	20	10	2.5	4	H	KJ MR
GT-8	18	--	4	86	5-49	250	7	2.9	8	H	KJ MR
GT-9	10	--	4	40	10-67	50	6	41.7	12	H	KJ MR
GT-10	10	--	4	35	12-68	8	10	5.0	1	H	KJ ET
GT-11	10	--	3	40	1-52	20	20	0.4	1	H	KJ MW
GT-12	10	--	3	50	6-53	40	--	--	2	H	KJ ET
GT-13	10	--	4	45	3-50	--	--	--	4	H	KJ MR
GT-14	--	--	4	71	8-55	25	--	--	2	H	KJ ET
GT-15	6	--	4	--	--	--	10	--	12	H	KJ MR
GT-16	--	--	4	--	--	50	--	--	4	H	KJ ET
GT-17	--	--	6	123	9-66	--	--	--	--	H	KJ ET
GT-18	--	--	--	--	--	--	--	--	--	N	KJ MR
GT-19	10	--	3	43	2-53	--	--	--	--	--	--
GT-20	38	--	8	24	8-48	600	40	15.0	8	H	KJ ET
GT-21	30	--	6	4	1-30	100	--	--	10	P	KJ MR
											KJ MW

Table 1.--Records of selected wells in Camden County and vicinity--Continued

MAP NUMBER	MUNICIPALITY	LAT-LONG	OWNER	LOCAL WELL NUMBER	DATE DRILLED (YEAR)	ALTITUDE OF LSD (FT)	CASING DEPTH (FT)	WELL DEPTH (FT)
			CAMDEN COUNTY					
GT-22	GLOUCESTER TWP	394759N0750158.1	GARDEN STATE WC	TEST 1	1970	78	458	466
GT-23	GLOUCESTER TWP	394754N0750343.1	BAR ST WC-BLKWD	BLACKWOOD DIV 3	1956	81	426	447
GT-24	GLOUCESTER TWP	394739N0750227.1	GLOU TWP BD ED	LEWIS SCHOOL	1964	117	435	475
GT-25	GLOUCESTER TWP	394719N0750146.1	ROBERT BENNETT	MONARCH BOILER	1968	110	--	200
GT-26	GLOUCESTER TWP	394718N0750341.1	GARDEN STATE WC	PEOPLES 1	1953	65	419	449
GT-27	GLOUCESTER TWP	394716N0750420.1	CAMDEN COUNTY	LAKELAND 1	--	55	--	420
GT-28	GLOUCESTER TWP	394714N0750410.1	CAMDEN COUNTY	LAKELAND 3	--	25	--	93
GT-29	GLOUCESTER TWP	394712N0750413.1	CAMDEN COUNTY	LAKELAND 2	--	25	--	386
GT-30	GLOUCESTER TWP	394712N0750220.1	SOCIETY DIVINE	SAVIOR	1951	137	492	512
GT-31	GLOUCESTER TWP	394711N0750416.1	CAMDEN COUNTY	LAKELAND FOUNT	--	25	--	--
GT-32	GLOUCESTER TWP	394702N0750321.1	MYRA LORING	--	1957	73	109	130
GT-33	GLOUCESTER TWP	394658N0750305.1	P HENDRICKS	--	1956	81	100	135
GT-34	GLOUCESTER TWP	394641N0745959.1	P BARATTA	--	1951	180	56	66
GT-35	GLOUCESTER TWP	394626N0750015.1	A MINARDI	1	1954	175	52	62
GT-36	GLOUCESTER TWP	394620N0750052.1	ROBERT BENNETT	HOME WELL	--	172	--	72
GT-37	GLOUCESTER TWP	394618N0750235.1	H A SANDBERG	--	1952	130	218	250
GT-38	GLOUCESTER TWP	394617N0750237.1	J BECICA	--	1949	111	200	220
GT-39	GLOUCESTER TWP	394614N0750017.1	POWELL	--	1951	178	49	54
GT-40	GLOUCESTER TWP	394607N0750031.1	GLOUCESTER TWP	BD OF EDUCATN	1960	178	293	315
GT-41	GLOUCESTER TWP	394606N0750016.1	F MORRISEY	--	1955	178	55	55
GT-42	GLOUCESTER TWP	394605N0750016.1	HOWARD MORRISEY	--	1956	178	55	60
GT-43	GLOUCESTER TWP	394558N0750210.1	E G MOTHO	--	1955	98	122	135
GT-44	GLOUCESTER TWP	394556N0745835.1	CAMDEN CO BD ED	VOC&TECH H S 1	1967	145	322	401
GT-45	GLOUCESTER TWP	394512N0750145.1	WALTER JOHNSON	--	1954	110	220	240
GT-46	GLOUCESTER TWP	394509N0745958.1	US ARMY	--	1954	173	82	102
GT-47	GLOUCESTER TWP	394430N0745958.1	US ARMY	--	1954	170	62	82
GT-48	GLOUCESTER TWP	394421N0750025.1	JOSEPH A MELZI	--	1952	162	58	64
GT-49	GLOUCESTER TWP	394343N0750049.1	D W BAUER	--	1951	164	40	45
HA-1	HADDON TWP	395444N0750316.1	MILGRAM THEATER	WESTMONT	--	50	135	150
HA-2	HADDON TWP	395436N0750252.1	MORGAN BROTHERS	REPLACEMENT	1967	50	431	451
HA-3	HADDON TWP	395416N0750336.1	HADDON TWP BD E	HADDON TWP HS1	1966	10	141	165
HA-4	HADDON TWP	395412N0750338.1	HADDON TWP W D	HTWD 4	1965	82	417	448
HA-5	HADDON TWP	395406N0750317.1	HADDON TWP W D	HTWD 1	1952	56	436	468
HA-6	HADDON TWP	395406N0750317.2	HADDON TWP W D	HTWD 1-R	1968	56	--	480
HA-7	HADDON TWP	395403N0750322.1	HADDON TWP W D	HTWD 2	1952	50	439	470
HA-8	HADDON TWP	395359N0750322.1	HADDON TWP W D	HTWD 3	1956	61	432	469
HA-9	HADDON TWP	395351N0750313.1	GREEN VALLEY FM	FARM 2	1965	77	194	215
HF-1	HADDONFIELD BORO	395404N0750202.1	HADDONFIELD W D	TEST WELL 1965	1965	45	490	510
HF-2	HADDONFIELD BORO	395404N0750202.2	HADDONFIELD W D	LAKE ST WELL	1967	50	307	372
HF-3	HADDONFIELD BORO	395333N0750132.1	HADDONFIELD W D	RULON	1956	20	523	572
HF-4	HADDONFIELD BORO	395324N0750138.1	HADDONFIELD W D	CREEK 3	1938	18	211	245
HF-5	HADDONFIELD BORO	395322N0750154.1	HADDONFIELD W D	LAYNE 2	1956	30	206	246
HF-6	HADDONFIELD BORO	395322N0750147.1	HADDONFIELD W D	HWD 2	1956	38	152	192
HF-7	HADDONFIELD BORO	395317N0750141.1	HADDONFIELD W D	HWD 4	1943	18	186	240
HH-1	HADDON HGTS BORO	395248N0750433.1	NJ WATER CO	EGGBERT 18	1958	22	144	191
HH-2	HADDON HGTS BORO	395246N0750433.2	NJ WATER CO	EGGBERT 6	1926	23	154	202
HH-3	HADDON HGTS BORO	395247N0750432.1	NJ WATER CO	EGGBERT 35	1967	22	425	484
HH-4	HADDON HGTS BORO	395246N0750433.1	NJ WATER CO	EGGBERT	1962	24	445	455
HH-5	HADDON HGTS BORO	395242N0750320.1	NJ WATER CO	HADDON 11	1945	84	212	272
HH-6	HADDON HGTS BORO	395240N0750324.1	NJ WATER CO	HADDON 14	1954	76	506	598
HH-7	HADDON HGTS BORO	395240N0750318.1	NJ WATER CO	HADDON 12	1947	66	227	267
HH-8	HADDON HGTS BORO	395238N0750317.1	NJ WATER CO	HADDON 30	1965	65	224	279
HH-9	HADDON HGTS BORO	395238N0750316.1	NJ WATER CO	HADDON 15	1956	65	452	631
HH-10	HADDON HGTS BORO	395231N0750314.1	NJ WATER CO	HADDON 20	1958	60	241	275
LS-1	LAUREL SPRGS BORO	394928N0750027.1	NJ WATER CO	LAUREL 15	1964	75	395	473
LS-2	LAUREL SPRGS BORO	394928N0750024.1	NJ WATER CO	LAUREL 13	1954	77	395	456
LS-3	LAUREL SPRGS BORO	394928N0750023.1	NJ WATER CO	LAUREL 6	1918	77	--	120
LS-4	LAUREL SPRGS BORO	394928N0750021.1	NJ WATER CO	LAUREL 8	1920	77	105	125
LS-5	LAUREL SPRGS BORO	394929N0750021.2	NJ WATER CO	LAUREL 10	1923	77	99	126
LS-6	LAUREL SPRGS BORO	394927N0750025.1	NJ WATER CO	LAUREL 4	1918	77	--	128
LS-7	LAUREL SPRGS BORO	394927N0750034.1	NJ WATER CO	LAUREL 1	1918	77	100	120
LI-1	LINDENWOLD BORO	394932N0745854.1	MUN UTIL AUTH	SEWAGE PLANT 1	1964	78	141	152
LI-2	LINDENWOLD BORO	394929N0745209.1	J A PIPPET	--	1954	93	92	100
LI-3	LINDENWOLD BORO	394805N0745732.1	LINDENWOLD ANM	ANIMAL SHELT 1	1967	160	--	285
MA-1	MAGNOLIA BORO	395135N0750246.1	OWENS CORNING	CORNING 2	1956	67	290	320
MA-2	MAGNOLIA BORO	395134N0750251.1	OWENS CORNING	TEST 2	1964	65	565	680
MA-3	MAGNOLIA BORO	395134N0750230.1	NJ WATER CO	MAGNOLIA 33	1967	60	271	348
MA-4	MAGNOLIA BORO	395134N0750229.1	NJ WATER CO	MAGNOLIA 16	1964	70	428	510
ME-1	MRCHNTVILLE BORO	395652N0750307.1	MERCH-PENNS W C	WOODBINE 1	1963	90	245	285
OA-1	OAKLYN BORO	395358N0750447.1	NJ WATER CO	OAKLYN TEST	1961	33	104	113
PE-1	PENNSAUKEN TWP	395943N0750212.1	CAMDEN CITY W D	MORRIS 1	--	9	77	107
PE-2	PENNSAUKEN TWP	395940N0750230.1	CAMDEN CITY W D	MORRIS SNA	1960	5	79	114
PE-3	PENNSAUKEN TWP	395939N0750229.1	CAMDEN CITY W D	MORRIS 5	1932	5	80	115
PE-4	PENNSAUKEN TWP	395934N0750229.1	CAMDEN CITY W D	MORRIS 3A	1953	17	73	107
PE-5	PENNSAUKEN TWP	395929N0750253.1	CAMDEN CITY W D	MORRIS 4A	1960	8	95	134
PE-6	PENNSAUKEN TWP	395929N0750253.2	CAMDEN CITY W D	MORRIS 4	--	8	95	130
PE-7	PENNSAUKEN TWP	395925N0750230.1	KINGSTON TRAP	TRAP RK IND 2	1966	35	115	123
PE-8	PENNSAUKEN TWP	395923N0750300.1	CAMDEN CITY W D	MORRIS 10	1960	16	75	115
PE-9	PENNSAUKEN TWP	395916N0750303.1	CAMDEN CITY W D	MORRIS 7	1932	10	85	120
PE-10	PENNSAUKEN TWP	395910N0750307.1	CAMDEN CITY W D	MORRIS 8	--	10	89	124

Table 1.--Records of selected wells in Camden County and vicinity--Continued

MAP NUMBER	LENGTH OF WELL OPEN TO AQUIFER (FEET)	DEPTH TO CONSOLIDATED ROCK (FT)	CASING DIAMETER (IN)	WATER LEVEL (FT)	DATE WATER LEVEL MEASURED	YIELD (GPM)	DRAWDOWN (FT)	SPECIFIC CAPACITY	PUMPING PERIOD (HOURS)	USE OF WATER	MAJOR AQUIFER
					CAMDEN COUNTY						
GT-22	10	--	5	125	11-70	75	33	2.3	5	U	KJ MR
GT-23	21	--	12	98	7-56	708	43	16.5	8	P	KJ MR
GT-24	20	--	6	129	8-64	220	56	3.9	8	T	KJ MR
GT-25	--	--	4	50	11-66	100	--	--	1	N	KJ MW
GT-26	30	--	6	70	--	--	--	--	--	P	KJ MR
GT-27	--	--	--	--	--	--	--	--	--	T	KJ MW
GT-28	--	--	--	F	8-70	--	--	--	--	T	KJ MW
GT-29	--	--	--	--	--	--	--	--	--	T	KJ MW
GT-30	20	--	10	103	7-51	510	100	5.1	72	H	KJ MR
GT-31	--	--	--	134	8-70	--	--	--	--	T	KJ MW
GT-32	21	--	3	25	11-57	100	--	--	3	H	KJ MW
GT-33	--	--	6	6	10-56	150	--	--	4	H	KJ NA
GT-34	10	--	3	35	10-51	25	5	5.0	--	H	AA CP
GT-35	10	--	3	32	7-54	8	3	2.7	6	H	AA CP
GT-36	--	--	--	--	--	--	--	--	--	--	AA CP
GT-37	32	--	6	44	8-52	170	--	--	--	H	KJ MW
GT-38	20	--	6	40	11-49	50	--	--	2	H	KJ MW
GT-39	5	--	3	30	11-51	5	6	0.8	--	H	AA CP
GT-40	--	--	6	125	4-60	80	--	--	8	H	KJ MW
GT-41	10	--	4	40	8-55	30	5	6.0	3	H	AA CP
GT-42	5	--	4	38	10-55	25	4	6.2	2	H	AA CP
GT-43	13	--	4	159	7-55	100	--	--	5	H	TL VM
GT-44	79	--	8	113	9-67	320	123	2.6	8	P	KJ MW
GT-45	20	--	4	40	11-54	80	15	5.3	5	H	TL MT
GT-46	20	--	8	38	5-54	240	48	5.0	24	P	AA CP
GT-47	20	--	8	30	5-54	240	40	6.0	24	P	AA CP
GT-48	6	--	4	24	7-52	25	--	--	5	H	AA CP
GT-49	5	--	3	20	10-51	5	5	1.0	--	H	AA CP
HA-1	15	--	8	--	--	150	--	--	--	--	KJ MR
HA-2	--	465	10	104	--	332	--	--	8	N	KJ MR
HA-3	20	--	6	60	11-66	200	23	8.7	--	I	KJ MR
HA-4	27	455	12	100	8-65	726	42	17.3	8	P	KJ MR
HA-5	32	475	10	80	2-52	800	40	20.0	8	P	KJ MR
HA-6	--	--	12	125	11-66	870	--	--	8	P	KJ MR
HA-7	31	--	10	74	4-52	1000	41	24.4	8	P	KJ MR
HA-8	37	--	10	95	6-56	800	35	22.9	--	P	KJ MR
HA-9	21	--	6	121	1-65	151	12	12.6	6	I	KJ MR
HF-1	20	553	6	90	1-65	350	35	10.0	8	U	KJ MR
HF-2	50	--	12	107	5-67	1030	48	21.5	8	P	KJ MR
HF-3	49	--	12	42	6-56	1100	38	28.9	48	P	KJ MR
HF-4	33	--	8	56	7-59	450	54	8.3	--	--	KJ MR
HF-5	40	--	12	105	5-56	1001	46	21.8	8	P	KJ MR
HF-6	40	--	8	55	7-59	600	31	19.4	--	P	KJ MR
HF-7	54	--	6	56	3-56	600	26	23.1	8	P	KJ MR
HH-1	47	--	12	69	7-58	708	45	15.7	8	P	KJ MR
HH-2	48	--	8	23	-26	535	25	21.4	3	P	KJ MR
HH-3	44	477	12	93	3-67	850	60	14.2	8	P	KJ MR
HH-4	10	479	6	61	1-52	30	30	1.0	8	U	KJ MR
HH-5	60	--	12	123	--	450	--	--	--	P	KJ MR
HH-6	53	603	8	101	8-54	1018	88	11.6	6	P	KJ MR
HH-7	40	--	10	93	--	--	--	--	--	P	KJ MR
HH-8	61	--	--	129	8-65	911	38	21.3	--	P	KJ MR
HH-9	74	--	8	72	2-56	1100	35	31.4	6	P	KJ MR
HH-10	21	--	12	35	8-58	550	52	13.3	8	P	KJ MR
LS-1	64	--	8	130	--	650	98	6.6	24	P	KJ MR
LS-2	61	--	8	54	6-54	759	80	9.5	--	P	KJ MR
LS-3	--	--	8	--	--	--	--	--	--	U	KJ MW
LS-4	20	--	6	44	9-52	175	--	--	--	P	KJ MW
LS-5	--	--	8	--	--	200	--	--	--	P	KJ MW
LS-6	--	--	8	--	--	330	--	--	--	P	KJ MW
LS-7	--	--	8	--	--	300	--	--	--	P	KJ MW
LI-1	11	--	6	16	11-64	50	--	--	--	--	KJ MW
LI-2	--	--	3	18	7-54	14	--	--	7	H	TL VM
LI-3	--	--	4	--	--	--	--	--	--	H	KJ MW
MA-1	30	--	12	96	3-56	1000	41	24.4	8	N	KJ MR
MA-2	60	--	6	128	6-64	668	48	13.9	22	N	KJ MR
MA-3	77	--	12	141	3-67	1090	46	23.7	24	P	KJ MR
MA-4	--	--	--	--	--	--	--	--	--	P	KJ MR
ME-1	--	--	12	85	9-63	1040	--	--	--	P	KJ MR
OA-1	8	--	6	56	10-61	50	16	3.1	16	U	KJ MR
PE-1	30	--	18	--	--	1180	--	--	--	P	KJ MR
PE-2	35	--	18	12	11-60	1450	46	31.5	--	P	KJ MR
PE-3	35	--	26	15	8-32	1630	37	44.1	8	P	KJ MR
PE-4	30	136	30	12	7-53	1000	34	29.4	8	P	KJ MR
PE-5	35	--	18	13	10-60	1585	28	56.6	8	P	KJ MR
PE-6	35	--	26	--	--	--	--	--	--	P	KJ MR
PE-7	8	--	8	26	8-66	200	34	5.9	2	N	KJ MR
PE-8	40	--	18	11	11-61	1450	35	41.4	8	P	KJ MR
PE-9	35	--	26	13	--	1680	32	52.5	8	P	KJ MR
PE-10	35	--	26	--	--	1412	--	--	--	P	KJ MR

Table 1.--Records of selected wells in Camden County and vicinity--Continued

MAP NUMBER	MUNICIPALITY	LAT-LONG	OWNER	LOCAL WELL NUMBER	DATE DRILLED (YEAR)	ALTITUDE OF LSD (FT)	CASING DEPTH (FT)	WELL DEPTH (FT)
			GLOUCESTER COUNTY					
WA-12	WASHINGTON TWP	394452N0750243.1	GINO'S REST 1		1970	150	278	310
WA-13	WASHINGTON TWP	394442N0750504.1	WALTER F EMOND 1		1958	130	220	244
WA-14	WASHINGTON TWP	394433N0750250.1	FRIES MILLS W C FMWC 1		1964	152	334	662
WA-15	WASHINGTON TWP	394423N0750157.1	C W GREENE --		1954	150	57	67
WA-16	WASHINGTON TWP	394420N0750630.1	HARRY J DE SOI 1		1968	90	141	165
WA-17	WASHINGTON TWP	394309N0750155.1	JOSEPH BRYAN --		1954	155	42	47
WE-1	WENONAH BORO	394751N0750912.1	WENONAH WATER D WWD 2		1951	30	270	310
WE-2	WENONAH BORO	394743N0750902.1	WENONAH WATER D WWD 1		1944	80	280	320
WD-1	WEST DEPTFORD TWP	395236N0750821.1	TEXAS OIL CO EAGLE PT OBS 4		1948	10	214	224
WD-2	WEST DEPTFORD TWP	395232N0750942.1	TEXAS OIL CO EAGLE PT OBS 3		1948	21	355	375
WD-3	WEST DEPTFORD TWP	395222N0750918.1	TEXAS OIL CO EAGLE POINT 3		1947	20	258	288
WD-4	WEST DEPTFORD TWP	395221N0750856.1	TEXAS OIL CO EAGLE POINT 5		1948	10	237	277
WD-5	WEST DEPTFORD TWP	395216N0750915.1	TEXAS OIL CO EAGLE POINT 1		1947	32	248	288
WD-6	WEST DEPTFORD TWP	395213N0750936.1	TEXAS OIL CO EAGLE POINT 4		1948	14	259	289
WD-7	WEST DEPTFORD TWP	395207N0750900.1	TEXAS OIL CO EAGLE POINT 2		1948	17	263	299
WD-8	WEST DEPTFORD TWP	395159N0750907.1	TEXAS OIL CO EAGLE PT OBS 1		1948	32	288	298
WD-9	WEST DEPTFORD TWP	395158N0750950.1	TEXAS OIL CO EAGLE PT OBS 2		1948	10	285	295
WD-10	WEST DEPTFORD TWP	395153N0750940.1	TEXAS OIL CO EAGLE POINT 6		1949	15	279	318
WD-11	WEST DEPTFORD TWP	394919N0751256.2	SHELL CHEM CO SHELL 3		1962	30	358	384
WD-12	WEST DEPTFORD TWP	394917N0751307.1	SHELL CHEM CO SHELL 1		1962	12	328	360
WS-1	WESTVILLE BORO	395221N0750737.1	WESTVILLE W D WWD 4		1957	16	286	313
WS-2	WESTVILLE BORO	395221N0750737.2	WESTVILLE W D WWD 3		1945	16	115	140
WB-1	WOODBURY CITY	394950N0750909.1	WOODBURY W D RAILROAD 5		1960	35	405	457
			PHILADELPHIA COUNTY					
PH-1	PHILADELPHIA CITY	395536N0750843.1	CROWN PAPER BRO 1		1925	13	--	108
PH-2	PHILADELPHIA CITY	395536N0750905.1	S P DRESS BEEF S PHILA BEEF 4		--	15	--	60
PH-3	PHILADELPHIA CITY	395534N0751106.1	GILBERT ADDEO PRES THEATER		1936	30	65	86
PH-4	PHILADELPHIA CITY	395524N0750822.1	CONTINENTL DIST CONT DIST R-7		1948	10	118	128
PH-5	PHILADELPHIA CITY	395511N0750833.1	WILSON-MARTIN WILSON 1		1953	13	150	175
PH-6	PHILADELPHIA CITY	395448N0750856.1	TWIN PACKING CO 1		--	10	140	180
PH-7	PHILADELPHIA CITY	395428N0750804.1	PUBLICKER IND P INDUSTRIES17		1937	8	159	169
PH-8	PHILADELPHIA CITY	395412N0751211.1	GULF OIL CORP WEST WELL		1946	17	72	182
PH-9	PHILADELPHIA CITY	395342N0751021.1	U S NAVAL BASE OBS WELL PH-12		1944	10	94	104
PH-10	PHILADELPHIA CITY	395329N0751012.1	U S NAVAL BASE 2		1940	10	207	232
PH-11	PHILADELPHIA CITY	395328N0751034.1	U S NAVAL BASE 4		1941	11	237	257
PH-12	PHILADELPHIA CITY	395328N0751028.1	U S NAVAL BASE 3		1941	12	238	268
PH-13	PHILADELPHIA CITY	395318N0750938.1	U S NAVAL BASE 9		1943	12	189	228
PH-14	PHILADELPHIA CITY	395316N0751049.1	U S NAVAL BASE OBS WELL PH-20		1946	13	228	243
PH-15	PHILADELPHIA CITY	395316N0751031.1	U S NAVAL BASE 8		1944	12	200	230
PH-16	PHILADELPHIA CITY	395315N0751007.1	U S NAVAL BASE 11		1952	11	214	245

EXPLANATION

1. AQUIFER
   - WG WISSAHICKON FORMATION
   - K3RA RARITAN FORMATION
   - K3MR MAGOTHY-RARITAN FORMATIONS
   - K3MV MERCHANTVILLE FORMATION
   - K3ET ENGLISHTOWN FORMATION
   - K3MW MOUNT LAUREL SAND-WENONAH FORMATION
   - K3NA NAVESINK FORMATION
   - TLHT HORNERSTOWN SAND
   - TLVH VINCENTOWN FORMATION-HORNERSTOWN SAND
   - TSMV MANASQUAN-VINCENTOWN FORMATION
   - TEMA MANASQUAN FORMATION
   - TMKW KIRKWOOD FORMATION
   - TFCS COHANSEY SAND
   - AACP PLEISTOCENE-COHANSEY SAND
   - TL TERTIARY-PALEOCENE
   - QGCM CAPE MAY FORMATION

2. WATER LEVEL BELOW LAND SURFACE
   - F FLOWS

3. WATER USE
   - A AIR CONDITION
   - C COMMERCIAL
   - H DOMESTIC
   - I IRRIGATION
   - N INDUSTRIAL
   - P PUBLIC SUPPLY
   - T INSTITUTIONAL
   - U UNUSED
   - Z OTHER

Table 1.--Records of selected wells in Camden County and vicinity--Continued

MAP NUMBER	LENGTH OF WELL OPEN TO AQUIFER (FEET)	DEPTH TO CONSOLI-DATED ROCK (FT)	CASING DIAM-ETER (IN)	WATER LEVEL (FT)	DATE WATER LEVEL MEASURED	YIELD (GPM)	DRAW DOWN (FT)	SPECIFIC CAPACITY	PUMPING PERIOD (HOURS)	USE OF WATER	MAJOR AQUIFER
					GLOUCESTER COUNTY						
WA-12	32	--	6	100	2-70	--	--	--	--	C	KJ MW
WA-13	24	--	6	74	2-68	50	15	4.0	1	H	KJ MW
WA-14	58	--	8	188	9-64	858	50	17.2	--	P	KJ MR
WA-15	30	--	6	32	10-54	15	6	2.5	--	H	KJ MR
WA-16	24	--	6	16	12-58	50	12	5.0	2	H	AA CP
WA-17	5	--	3	15	5-54	9	7	1.3	4	H	KJ MW
WE-1	46	--	12	67	2-51	1200	40	30.0	8	P	AA CP
WE-2	40	700	12	90	5-44	500	30	16.7	24	P	KJ MR
WO-1	10	--	3	31	7-48	--	--	--	--	U	KJ MR
WO-2	20	298	6	42	11-52	--	--	--	--	U	KJ MR
WO-3	30	288	12	39	12-47	1012	43	23.5	24	N	KJ MR
WO-4	40	287	12	46	10-48	1029	44	23.4	8	N	KJ MR
WO-5	40	--	12	39	11-47	1110	34	32.6	8	N	KJ MR
WO-6	31	--	14	38	3-48	1100	52	21.2	30	N	KJ MR
WO-7	31	--	16	38	1-48	1100	59	18.6	24	N	KJ MR
WO-8	10	--	4	--	10-47	--	--	--	--	U	KJ MR
WO-9	10	--	3	18	7-48	250	--	--	--	U	KJ MR
WO-10	39	--	16	35	1-49	1200	76	15.8	48	N	KJ MR
WO-11	25	--	12	35	12-61	1000	105	9.5	8	N	KJ MR
WO-12	30	--	12	30	10-61	1000	36	27.8	8	N	KJ MR
WS-1	27	325	10	51	--	1205	95	12.7	8	P	KJ MR
WS-2	28	--	10	24	6-45	500	28	17.9	2	P	KJ MR
WW-1	52	--	12	62	4-60	1016	24	42.3	10	P	KJ MR
					PHILADELPHIA COUNTY						
PH-1	--	--	8	18	--	100	--	--	--	N	KJ MR
PH-2	--	--	--	--	--	--	--	--	--	Z	KJ MR
PH-3	21	--	8	39	6-36	90	30	3.0	--	A	QG CM
PH-4	17	--	10	41	10-48	--	--	--	--	N	KJ RA
PH-5	25	--	10	--	--	250	--	--	--	Z	KJ MR
PH-6	15	172	--	72	12-43	726	--	--	--	N	KJ RA
PH-7	30	--	18	48	--	1030	--	--	--	I	KJ RA
PH-8	10	--	6	14	3-46	420	--	--	--	N	KJ RA
PH-9	10	--	8	27	11-44	--	--	--	--	U	KJ MR
PH-10	35	--	12	19	7-40	730	75	9.7	--	N	KJ RA
PH-11	30	--	12	25	--	800	--	--	--	N	KJ RA
PH-12	--	--	12	30	--	860	--	--	--	N	KJ RA
PH-13	--	--	12	32	--	710	--	--	--	N	KJ RA
PH-14	5	--	8	23	5-46	--	--	--	--	U	KJ MR
PH-15	30	--	8	51	12-44	740	--	--	--	N	KJ RA
PH-16	31	--	12	47	--	640	--	--	--	N	KJ RA

REFERENCE NO. 2

STATE OF NEW JERSEY
DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT

DIVISION OF WATER POLICY AND SUPPLY

UPPER CRETACEOUS SERIES

Raritan and Magothy Formations

Geology

The Raritan and Magothy Formations crop out in a belt 0.2 to 3.2 miles wide adjacent to the Delaware River and cover about 32 square miles of surface area in the county. The formations underlie the Delaware River and also crop out in Pennsylvania.

The Raritan and Magothy Formations are considered to be mostly of continental origin. They were deposited largely by the action of streams, although in a few localities at least part of these formations suggest a marine environment. The Raritan Formation is composed of light-colored quartzose sand, clay, and some gravel. The characteristic colors of the Raritan Formation are white, yellow, brown, red, and gray. The Magothy Formation consists of beds of dark-gray or black clay, commonly lignitic, alternating with white micaceous fine sand. In the county, the Raritan and Magothy Formations cannot be differentiated except locally because of similar lithology. The combined thickness of the Raritan and Magothy Formations in Gloucester County may be as much as 500 feet, and the formations thicken downdip toward Salem and Cumberland Counties.

The top of the Magothy Formation dips about 40 to 45 feet per mile to the southeast toward the Atlantic Ocean (fig. 3). The basal part of the Raritan Formation dips about 60 feet or more per mile. The Raritan and Magothy Formations rest unconformably on the Wissahickon Formation and in turn downdip from the outcrop area are overlain unconformably by the Merchantville Formation.

Hydrology

The undifferentiated Raritan and Magothy Formations contain the most important and productive aquifers in Gloucester County. The many industries adjacent to the Delaware River and most of the public water companies in the county obtain ground water from these formations. Wells tapping these formations yield up to 1,400 gpm (gallons per minute). The specific capacities of 85 wells range from 0.8 to 56 gpm per foot of drawdown and average 17 gpm per foot of drawdown. The water-bearing characteristics and thickness of the water-bearing zones (and aquicludes) in these formations vary greatly within short distances. The sand and gravel aquifers range in thickness from a few feet to 100 feet, although the total thickness of the formations may be much greater.

In the outcrop area two water-bearing zones are identified. The upper zone, usually artesian, includes the water-bearing beds in the upper 120

feet of the Raritan and Magothy Formations. Locally, where the upper zone is unconfined and hydraulically connected with the shallow water-table aquifer in the Cape May Formation, the total thickness of the water-bearing zone may be as much as 140 feet. The lower zone is always artesian in Gloucester County and is composed of the water-bearing beds in the lower 200 feet of the formations. Available well data indicate that the upper and lower aquifers are separated by clay beds in the outcrop area but their identification elsewhere in the county is uncertain. However, where the two water-bearing zones can be differentiated, their hydrologic properties are separately described.

In the Paulsboro-Gibbstown area, wells tapping the upper water-bearing zone yield from 180 to 1,400 gpm. E. I. du Pont de Nemours & Co., Hercules Powder Co., Mobil Oil Co., the Borough of Paulsboro, and Greenwich Township Water Department have wells which obtain water from this zone of the Raritan and Magothy Formations. In the National Park-Westville area some wells yield as much as 800 gpm from this upper zone. Wells in the Paulsboro-Gibbstown area tapping the lower water-bearing zone yield from 150 to 1,100 gpm. Most of the wells in the National Park-Westville area are developed in the basal part of the lower zone and yields of wells range from 250 to 1,200 gpm.

In the central and southern parts of the county, wells obtain water from the upper part of the Raritan and Magothy Formations. In the Pitman and Glassboro area, wells yield from 500 to 1,000 gpm. At Clayton one well yields about 700 gpm. The upper water-bearing zone has been tapped by wells at Swedesboro, Wenonah, Mantua, Woodbury, Mullica Hill, and Clarksboro. The lower water-bearing zone has not been developed extensively in the central and southwestern parts of the county because abundant water is available at shallower depths. Water from this zone is probably brackish in the southeastern fifth of the county.

Several pumping tests were made in various parts of the county to determine the hydraulic characteristics of the aquifers. In the National Park area, the coefficient of transmissibility of the lower water-bearing zone is 42,000 gpd per ft and in the upper zone 52,000 gpd per ft. At Gibbstown, the upper zone has a coefficient of transmissibility of 50,000 gpd per ft, and at Clayton, 16 miles downdip, the coefficient is 30,000 gpd per ft. The average coefficient of permeability of the aquifers in the Raritan and Magothy Formations is about 1,000 gpd per sq ft.

A pumping test at the Eagle Point refinery of the Texas Oil Co. near Westville indicated coefficients of transmissibility ranging from 51,000 to 68,000 gpd per ft, coefficients of storage ranging from 1.7×10^{-4} to 9.0×10^{-5}, and permeabilities ranging from 1,000 to 1,400 gpd per sq ft.

REFERENCE NO. 3

Uncontrolled Hazardous Waste Site Ranking System

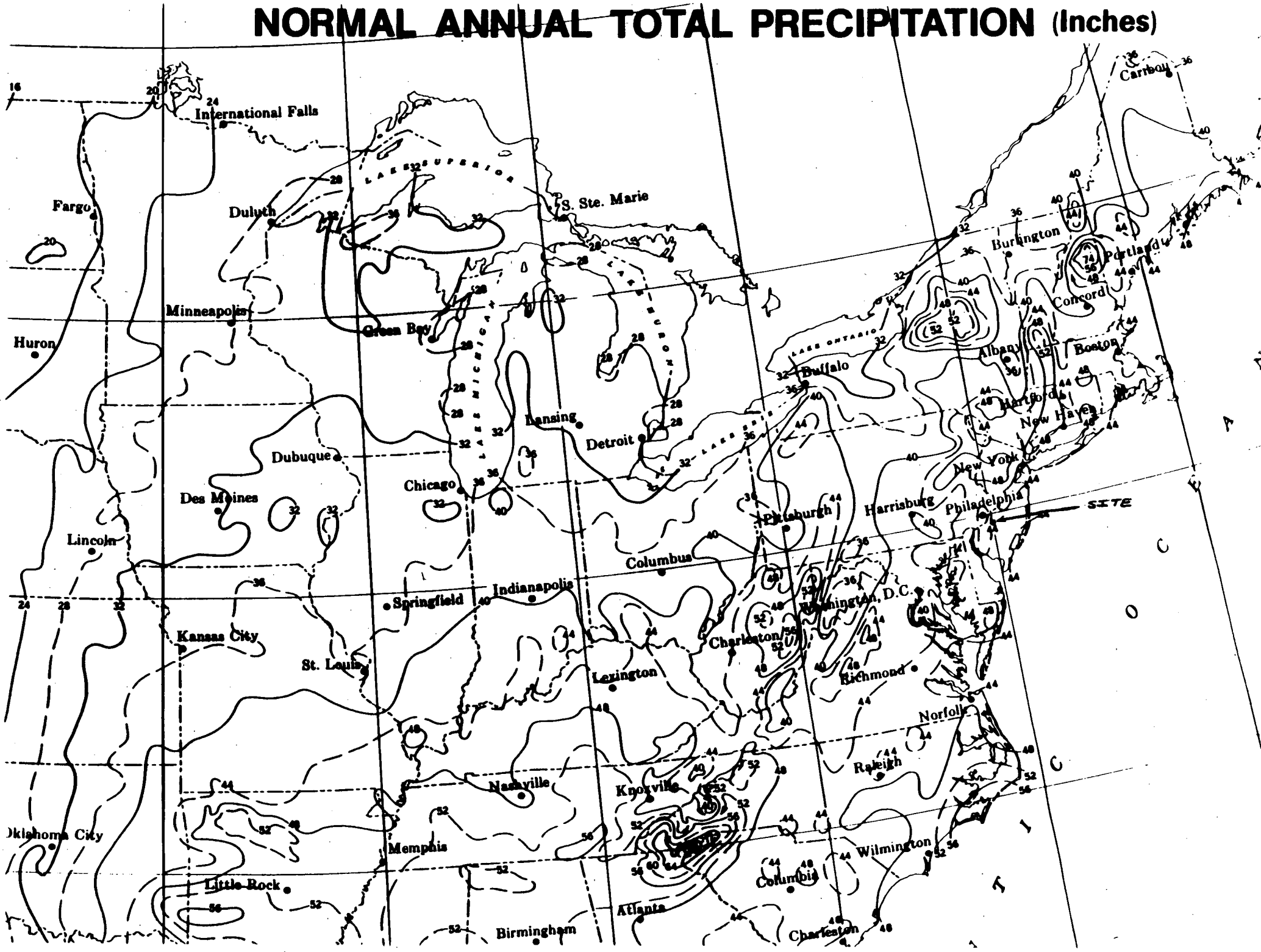
A Users Manual
(HW-10)

Originally Published in
the July 16, 1982, *Federal Register*

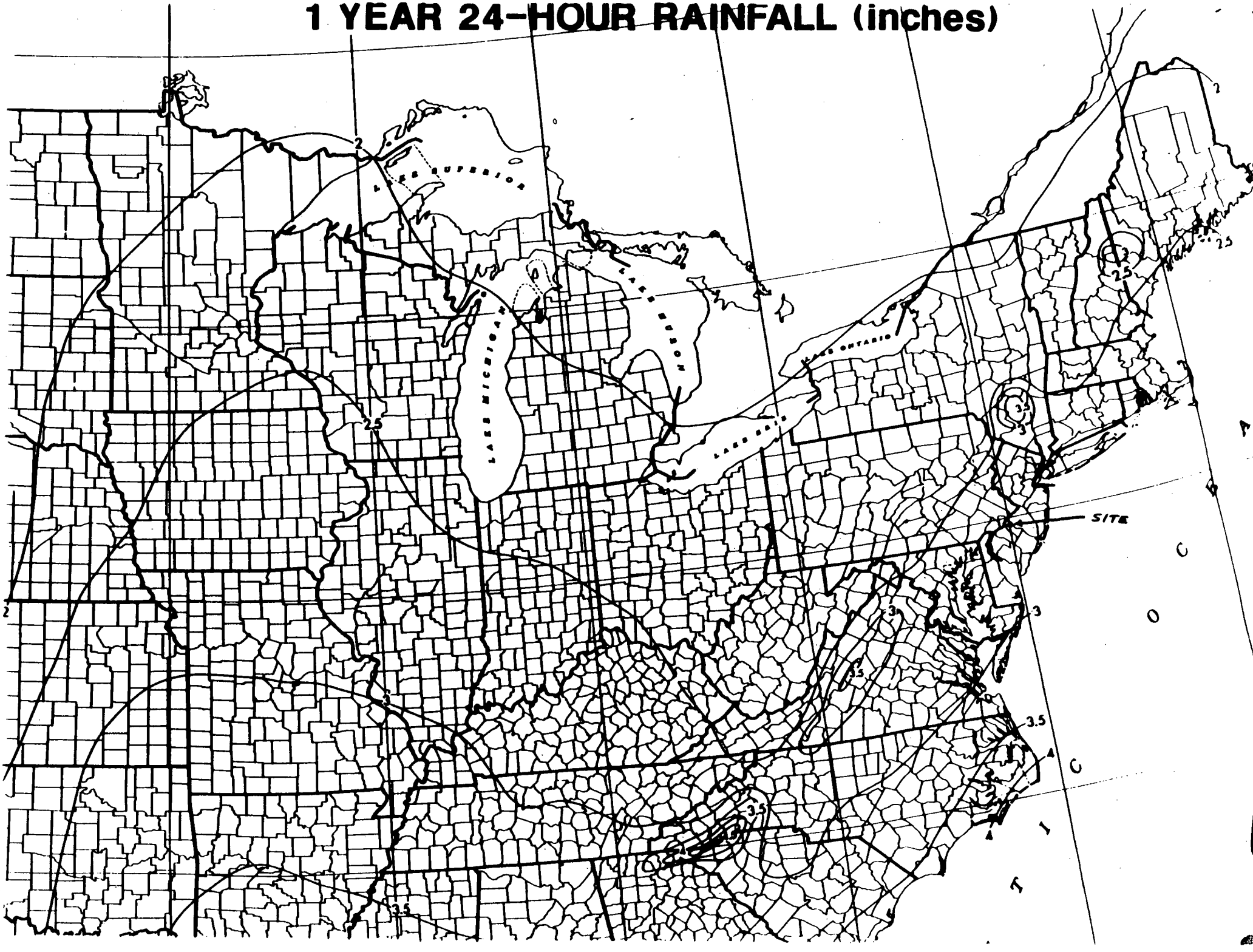
United States
Environmental Protection
Agency

1984

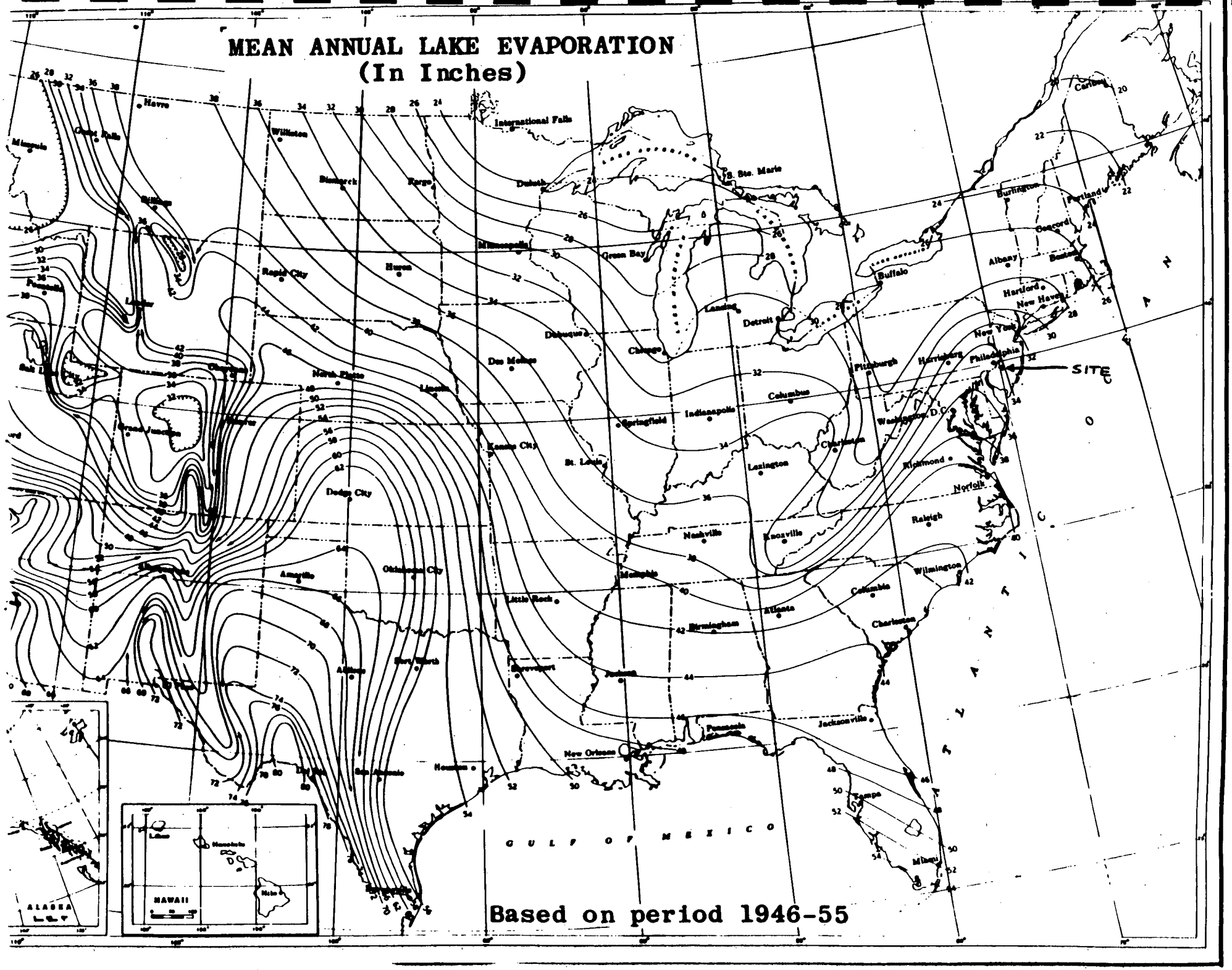
NORMAL ANNUAL TOTAL PRECIPITATION (Inches)



1 YEAR 24-HOUR RAINFALL (inches)

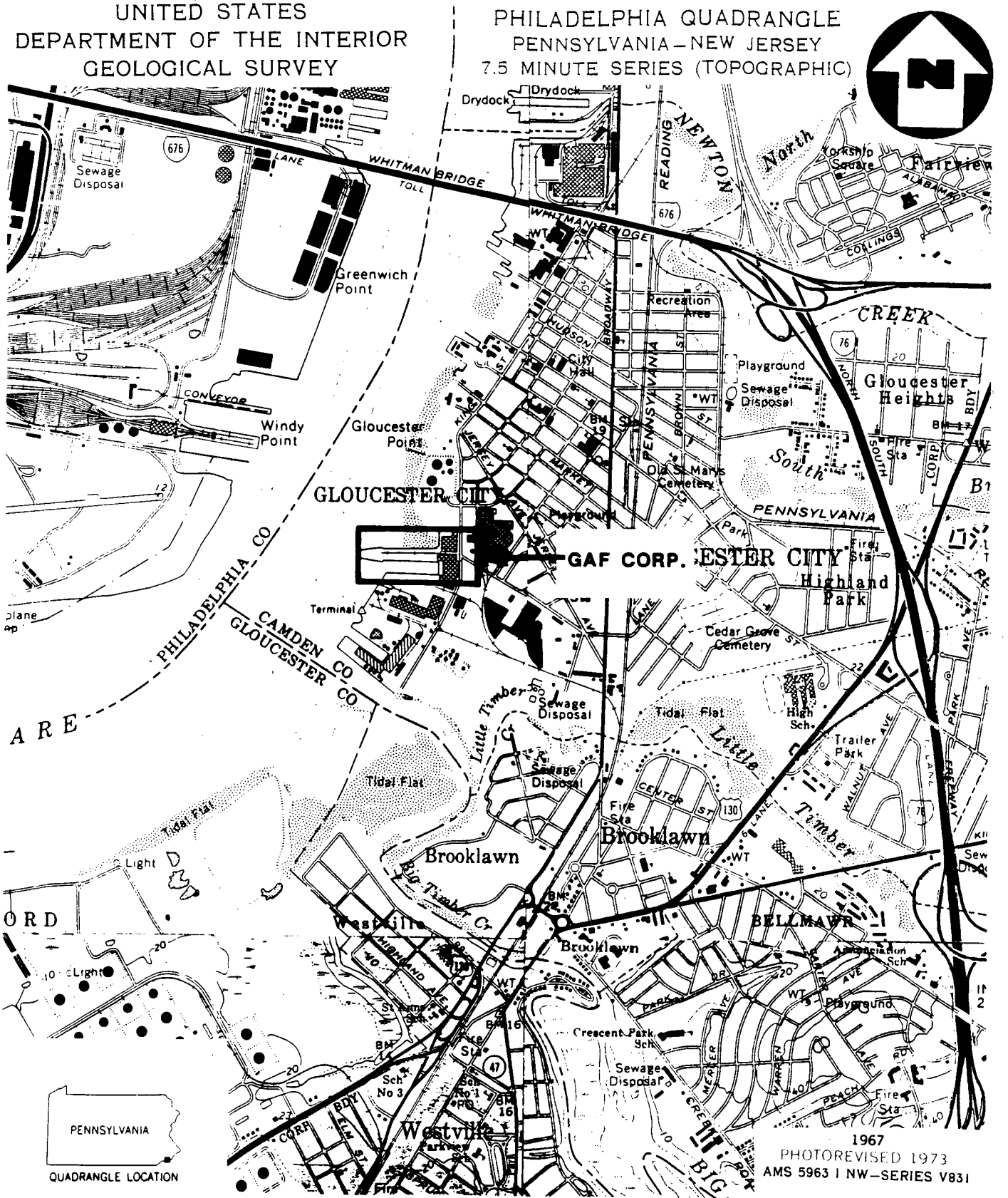


MEAN ANNUAL LAKE EVAPORATION
(In Inches)



Based on period 1946-55

REFERENCE NO. 4



(QUAD) PHILADELPHIA, PA.-N.J.

GAF CORP., GLOUCESTER CITY, N.J.

SCALE: 1" = 2000'

NUS CORPORATION

REFERENCE NO. 5

SFO Tom D.

Bill → Scot
cc Terry

GAF- 01 [illegible]

Let's protect our earth

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT

John J. Trela, Ph.D., Director
401 East State St.
CN 028
Trenton, N.J. 08625
609 - 633 - 1408

M E M O R A N D U M

JAN [illegible] 1988

TO: David Shotwell, Chief
Bureau of Field Operations

FROM: Stephen A. Borgianini, Chief
Bureau of Planning and Assessment

SUBJECT: REFERRAL OF GENERAL ANILINE AND FILM, GAF
CHARLES AND WATER STREETS, GLOUCESTER CITY, CAMDEN COUNTY
EPA #NJD043292606

The Bureau of ECRA Applicability and Compliance has been involved with the company since 1985 in an attempt to have GAF comply with standard ECRA compliance procedures. To date no ECRA trigger has occurred at the facility which, in effect, leaves ECRA without power to institute compliance actions. At ECRA's request, a Preliminary Assessment (PA) on the site was performed by this Bureau. The PA narrative is enclosed, all associated materials are on file at 65 Prospect Street, Trenton.

ECRA has requested that the case be referred to your Bureau for further action. Should you need assistance please contact Clare Whittaker of my staff at 633-2217.

Thank you.

CW:SAB:mer

RECEIVED
JAN 15 1988
Divis[illegible] of Waste [illegible]

GENERAL ANILINE AND FILM
GLOUCESTER CITY, CAMDEN COUNTY, NJ

General Aniline and Film (GAF) occupies approximately 36 acres on Water Street in Gloucester City, Camden County, N.J. The facility was involved in the recycling of corrugated, mixed paper, woodchips and saw dust into felt paper for roofing, flooring and the production of vinyl siding. The felt paper was manufactured, then shipped off-site for saturation and binding to make various end-products. Asbestos for pipe installation was also said to be manufactured at the facility. 12% - 15% of the asbestos produced was discarded as solid waste. Operations at this site began in 1927 with Ruberoid Corporation. Ruberoid subsequently merged into GAF in 1967 and operations at the site continued until 1984. In 1984 production was stopped and the facility closed indefinitely; the site is currently for sale.

GAF discharged non-contact cooling water to the Delaware River under NJPDES/DSW permit # NJ0005371. The final NJPDES/DSW permit was issued 3/19/85. On 10/6/86 GAF filed an affidavit of exemption to terminate their NJPDES permit, reasoning that the facility was closed.

Records of spill and incident reports reveal numerous events occurring at the site during the period of 1978-83. One spill of note, required the removal of approximately 400 gallons of Askarel (PCB) to an acceptable off-site disposal location. NJDEP Southern Region Enforcement Bureau files indicate that no further action was required for any of these events.

A file search revealed that various hazardous waste liquids, solids and corrosive materials were removed from the facility between 1985-1986 by outside parties, Clean Venture and S-J Transportation Co. A site investigation by NJDEP/DWM on 4/27/87 revealed no visible contamination or storage of wastes on site. An inspection in the same month by NJDEP/ECRA Bureau determined that GAF's manufacturing facility, power plant, Charles Street and Water Street warehouses are one contiguous industrial establishment pursuant to ECRA.

GAF is located in a largely industrial area adjacent to metropolitan Philadelphia. The site overlies the unconsolidated sands and clays of the Raritan formation which is the major aquifer for the domestic/public supply of the area. Industrial wells are also in the vicinity of the site. GAF possessed no wells on site and relied on the public water supply. From information obtained from GAF's permit application, a substantial amount of process waste water (92 thousand gal/day) evaporated daily at the facility. Information gained from aerial photographs of 1940 and 1978 identify what appears to have been storage tanks on either side of the bulkhead, and the presence of a lagoon-like area at the base of the bulkhead. This may potentially have been a site for wastewater evaporation. If this was the case, it may have presented a possible route for contaminant migration to groundwater. Former employees state that an area which lies behind the facility and between the Delaware River was used as a dump site for asbestos waste from the plant. The practice was began with Ruberoid and continued until about 1971. Part of the asbestos was trucked off site and used as "clean fill" in areas of Gloucester City.

Based on the limited information available, the fact that operations ended in 1984 and that the facility is currently for sale, the case of GAF should be directed to the Industrial Site Evaluation Element for further evaluation and determination of applicability of ECRA statutes to the case.

Submitted by:

Clare Whittaker
HSMS IV
Bureau of Planning and Assessment

CW:mer

REFERENCE NO. 6

ERP No. D-MMS-A02224-00, Rating EO2, 1989 Central and Western Planning Areas Gulf of Mexico Outer Continental Shelf (OCS) Oil and Gas Sales No. 118 and 122, Lease Offerings offshore the coast of Alabama, Mississippi, Louisiana and Texas.

Summary

EPA expressed objections to the proposed action of unrestricted leasing in the Central and Western Gulf. EPA also expressed concern over the lack of any proposed mitigation for possible impacts to deep-water benthic communities. EPA also expressed concern that ozone modeling of the effect of offshore emission on onshore air quality be conducted.

ERP No. D-NPS-K61095-NV, Rating LO, Death Valley National Monument, General Management Plan, Implementation, Inyo and San Bernardino Counties, CA and Nye and Esmeralda Counties, NV.

Summary

EPA expressed a lack of objections to the proposed management plan but noted that future multiple use activities (mining, campgrounds) will require an assessment of air quality, surface water and ground water impacts.

Final EISs

ERP No. F-COE-H30000-IA, Des Moines Recreational River and Greenbelt Area, Development, Operation and Maintenance, Des Moines River, Webster, Hamilton, Boone, Dallas, Polk, and Warren Counties, IA.

Summary

EPA has no objections to this project with the understanding that each unit of the project will be evaluated separately for NEPA compliance at a later date.

ERP No. F-FHW-F40290-WI, WI-TH-83 Improvement, I-94 to Cardinal Lane/WI-TH-16, Funding and 404 Permit, Waukesha County, WI.

Summary

EPA has no objection to this project, long as a minimum of 0.8 acre of additional wetlands are created.

(Note: The above summary should have appeared in the 6-10-88 Federal Register Notice.)

ERP No. F-USN-C85041-NJ, Colts Neck, Naval Weapons Station Earle Family Housing Development, Construction, Monmouth County, NJ.

Summary

EPA's concern regarding the location of the mitigation site has been addressed in this document. In addition, information within the document clarified our questions with respect to the delineation of wetlands, and the point of discharge of the wastewater treatment plant. Accordingly, EPA has no unresolved concerns regarding the implementation of the project as proposed.

ERP No. F-USN-D84005-VA, Empress II Operation, Electromagnetic Pulse, Radiation Environment Simulator for Ships, Chesapeake Bay (West of Bloodsworth Island) and Atlantic Ocean (Virginia Capes Operating Area), off the Coast of VA.

Summary

EPA expressed a preference for the proposed site and requested a thorough monitoring program for the project.

(Note: The above summary should have appeared in the 6-17-88 Federal Register Notice.)

Dated: June 21, 1988.

William D. Dickerson,

Deputy Director, Office of Federal Activities.

[FR Doc. 88-14353 Filed 6-23-88; 8:45 am]

BILLING CODE 6560-50-M

[ER-FRL-3404-3]

Environmental Impact Statements; Availability; Weekly Receipts

Responsible Agency: Office of Federal Activities, General Information (202) 382-5073 or (202) 382-5075. Availability of Environmental Impact Statements, Filed June 13, 1988 Through June 17, 1988. Pursuant to 40 CFR 1506.9.

EIS No. 880189, Draft, BLM, AZ, San Pedro River Riparian Resource Management Plan, Implementation, San Simon Resource Area, Safford District, Cochise County, AZ, Due: September 21, 1988, Contact: Jerrold Coolidge (602) 428-4040.

EIS No. 880190, Draft, DOE, ND, Charlie Creek-Belfield 345 kV Transmission Line Project, Construction, Operation and Maintenance, Implementation, Billings, Stark, McKenzie and Dunn Counties, ND, Due: August 8, 1988, Contact: James D. Davis (406) 657-5525.

EIS No. 880191, Draft, SCS, MD, East Yellow Creek Watershed, Soil Erosion and Flood Damage Reduction Plan, Funding and Implementation, Sullivan, Linn and Charlton Counties, MO, Due: August 8, 1988, Contact: Russell C. Mills (314) 875-5214.

EIS No. 880192, Draft, NPS, AK, Denali National Park and Preserve, Wilderness Recommendations, Designation or Nondesignation, AK, Due: August 29, 1988, Contact: Linda Nebel (907) 257-2654.

EIS No. 880193, Draft, APS, WY, Little Bighorn River, Wild and Scenic River Study, National Wild and Scenic Rivers System, Designation, Bighorn National Forest, Sheridan County, WY, Due: September 22, 1988, Contact: Arthur Bauer (307) 672-6751.

EIS No. 880194, Draft, USN, PA, U.S. Navy Girard Point Site, Sale to the Philadelphia Muncipal Authority for the Establishment of a Steam Generation Facility that Produces Steam for Purchase by the U.S. Navy, City of Philadelphia, PA, Due: August 12, 1988, Contact: Kenneth Petrone (215) 697-6431.

EIS No. 880195, Final, FHW, PA, PA-23/New Holland Avenue/LR-1124, Section B01 Relocation, US 30 to Walnut and Chestnut Streets, Funding and 404 Permit, Manheim, East Lampeter and Lancaster Townships and the City of Lancaster, Lancaster County, PA, Due: July 25, 1988, Contact: Philibert A. Quellet (717) 782-4422.

EIS No. 880196, Draft, FRC, REG, Regulations Governing Independent Power Producers (RM88-4-000) and Regulations Governing Bidding Programs (RM88-5-000), Implementation, Due: August 15, 1988, Contact: Gilda Rodriquez (202) 357-8155.

EIS No. 880197, Draft, SCS, MS, Whites Creek, Watershed Protection and Flood Prevention Plan, Funding, Possible 404 Permit and Implementation, Webster County, MS, Due: August 8, 1988, Contact: L. Peter Heard (601) 965-5205.

EIS No. 880198, Draft, EPA, FL, CF Mining Complex II, Open Pit Phosphate Mine and Beneficiation Plan, Construction and Operation, NPDES and 404 Permits, Hardee County, FL, Due: August 8, 1988, Contact: Maryann Gerber (404) 347-3776.

Dated: June 21, 1988.

William D. Dickerson,

Deputy Director, Office of Federal Activities.

[FR Doc. 88-14352 Filed 6-23-88; 8:45 am]

BILLING CODE 6560-50-M

[FRL-3340-F]

[redacted]

AGENCY: U.S. Environmental Protection Agency.

ACTION: Notice.

SUMMARY: Notice is hereby given that, pursuant to section 1424(e) of the Safe Drinking Water Act, the Administrator of the U.S. Environmental Protection Agency (EPA) has determined that the

New Jersey Coastal Plain Aquifer System, underlying the New Jersey Coastal Plan Area, is the sole or principal source of drinking water for the Counties of Monmouth, Burlington, Ocean, Camden, Gloucester, Atlantic, Salem, Cumberland, Cape May and portions of Mercer and Middlesex Counties, New Jersey, and that the acquifer, if contaminated, would create a significant hazard to public health. As a result of this action EPA will review Federally-assisted projects (projects which receive Federal financial assistance through a grant, contract, loan guarantee, or otherwise) proposed for construction in a project review area which includes the New Jersey Coastal Plain Area and a portion of the aquifer streamflow source zone. The streamflow source zone includes upstream portions of the Delaware River Basin in the States of Delaware, New Jersey, New York and Pennsylvania. Federally-assisted projects will be reviewed to ensure that they are designed and constructed so that they do not create a significant hazard to public health. Projects outside of the project review area but within the streamflow source zone will be reviewed if they require an Environmental Impact Statement (EIS).

DATES: This determination shall be promulgated for purposes of judicial review at 1:00 P.M. Eastern Time on July 7, 1988. This determination shall become effective on August 8, 1988.

ADDRESSES: The data on which these findings are based, detailed maps of the New Jersey Coastal Plain Area and the project review area, a compilation of public comments and the Agency's response to those comments, are available to the public and may be inspected during normal business hours at the U.S. Environmental Protection Agency, Water Management Division, 26 Federal Plaza, New York, New York 10278. In addition, copies of a map showing the designated area and a responsiveness summary to public comment are available upon request.

FOR FURTHER INFORMATION CONTACT: John Malleck, Chief, Office of Ground Water Management, Water Management Division, 26 Federal Plaza, New York, New York 10278 (212) 264-5635.

SUPPLEMENTARY INFORMATION: Notice is hereby given that pursuant to section 1424(e) of the Safe Drinking Water Act (42 U.S.C., 300f, 300h-3(e), Pub. L. 93-523), the Administrator of the U.S. Environmental Protection Agency (EPA) has determined that the New Jersey Coastal Plain Aquifer System, underlying the New Jersey Coastal Plain Area, is the sole or principal source of drinking water for the Counties of Monmouth, Burlington, Ocean, Camden, Gloucester, Atlantic, Salem, Cumberland, Cape May and portions of Mercer and Middlesex Counties, New Jersey. Pursuant to section 1424(e), Federally-assisted projects proposed for construction in the New Jersey Coastal Plain Area and the project review area within portions of its streamflow source zone will be subject to EPA review. The streamflow source zone for the New Jersey Coastal Plain Aquifer System includes upstream portions of the Delaware River Basin in the States of Delaware (New Castle County), New Jersey (Mercer-part, Hunterdon-part, Sussex-part, and Warren Counties), New York (Delaware, Orange, Sullivan and Ulster Counties), and Pennsylvania (Berks-part, Bucks, Carbon-part, Chester-part, Delaware, Lackawanna-part, Lancaster, Lehigh, Luzerne-part, Monroe Montgomery, Northampton, Philadelphia, Pike, Schuykill and Wayne Counties). The project review area includes that portion of the streamflow source zone which lies within two miles of the Delaware River in the States of New Jersey (in Mercer, Hunterdon, Sussex and Warren Counties), Delaware (in New Castle County), Pennsylvania (in Delaware, Philadelphia, Bucks, Monroe, Northampton, Pike and Wayne Counties) and New York (in Delaware, Orange and Sullivan Counties).

I. Background

Section 1424(e) of the Safe Drinking Water Act states: (e) If the Administrator determines, on his own initiative or upon petition, that an area has an aquifer which is the sole or principal drinking water source for the area and which, if contaminated, would create a significant hazard to public health, he shall publish notice of that determination in the Federal Register. After the publication of any such notice no commitment for Federal financial assistance (through a grant, contract, loan guarantee, or otherwise) may be entered into for any project which the Administrator determines may contaminate such aquifer through a recharge zone so as to create a significant hazard to public health, but a commitment for Federal financial assistance may, if authorized under another provision of law, be entered into to a plan or design the project to assure that it will not so contaminate the aquifer.

On December 4, 1978 the Environmental Defense Fund, Inc. and the Sierra Club New Jersey Chapter petitioned the EPA Administrator to determine that the Counties of Monmouth, Burlington, Ocean, Camden, Gloucester, Atlantic, Salem, Cumberland, Cape May and portions of Mercer and Middlesex Counties, New Jersey, constitute an area whose aquifer system is "the sole or principal drinking water source for the area and which, if contaminated, would create a significant hazard to public health." On March 21, 1979, EPA published the petition in the Federal Register. Public hearings on the petition request were held May 1, 15 and 17, 1979 in Lindenwold, Trenton, Freehold and Pomona, New Jersey. A May 19, 1983 Federal Register notice announced the availability of additional technical information and the extension of public comment period to July 15, 1983.

II. Basis for Determination

Among the factors to be considered by the Administrator in connection with the designation of an area under section 1424(e) are:

(1) Whether the aquifer is the area's sole or principal source of drinking water and (2) whether contamination of the aquifer would create a significant hazard to public health.

On the basis of information available to this Agency, the Administrator has made the following findings, which are the basis for the determination noted above:

(1) The New Jersey Coastal Plain Area depends upon the underlying Coastal Plain Aquifer System for seventy-five (75) per cent or more of its drinking water to serve 3 million people.

(2) Data show that the formations of the New Jersey Coastal Plain Area are hydrologically interconnected such that they respond collectively as an interrelated aquifer system.

(3) If the aquifer system were to become contaminated, exposure of the persons served by the system would constitute a significant hazard to public health.

(4) Alternative supplies capable of providing fifty (50) per cent or more of the drinking water to the designated area are not available at similar economic costs.

The New Jersey Coastal Plain Aquifer System is highly susceptible to contamination through its recharge zone from a number of sources, including but not limited to, chemical spills, leachate from landfills, stormwater runoff, highway de-icing, faulty septic systems wastewater treatment systems and waste disposal lagoons. The aquifer is also susceptible to contamination to a lesser degree from the same sources, through its streamflow source zone. Since ground-water contamination can be difficult or impossible to reverse

completely and since the acquifer in this area is solely or principally relied upon for drinking water purposes by the population of the New Jersey Coastal Plain Area, contamination of the aquifer could pose a significant hazard to public health.

III. Description of the New Jersey Coastal Plain Area Aquifer System, Its Recharge Zone and Its Streamflow Source Zone

The New Jersey Coastal Plain Aquifer System consists of a wedge-shaped mass of unconsolidated sediments composed of clay, silt, sand and gravel. The wedge thins to a feathered edge along the Fall Line and attains a thickness of over 6,000 feet at the tip of Cape May County, New Jersey.

These sediments range in age from Cretaceous to Holocene and can be classified as continental, coastal or marine deposits. There are five major aquifers within the Coastal Plain Aquifer System. They are the Potomac-Raritan-Magothy Aquifer System, Englishtown Aquifer, Wenonah-Mount Laurel Aquifer, Kirkwood Aquifer and the Cohansey Aquifer. Natural recharge to the New Jersey Coastal Plain Aquifer System occurs primarily through direct precipitation on the outcrop area of the geologic formations. A smaller component of natural recharge to the deeper layers of the system occurs by vertical leakage from the upper layers. This accounts for a small percentage of the total amount of recharge; however, over a large area and a long period of time the amount of water transmitted can be significant.

The New Jersey Coastal Plain Aquifer discharges to the surface through streams, springs and evapotranspiration. Many streams ultimately flow into bays or directly into the ocean. Development of the ground-water reservoir as a water supply source constitutes another discharge component which today accounts for a significant portion of discharge from the overall system. In certain areas (e.g. along the Delaware River) heavy pumping has caused a reversal in the normal discharge from the aquifer (Raritan-Magothy) such that the surface stream (Delaware River) now recharges the aquifer. This phenomenon implies that, in addition to the New Jersey Coastal Plain Area, the Delaware River Basin within Delaware, New Jersey, Pennsylvania and New York must be regarded as a streamflow source zone (an upstream headwaters area which drains into a recharge zone), which flows into the Coastal Plain Area.

IV. Information Utilized in Determination

The information utilized in this determination includes the petition, written and verbal comments submitted by the public, and various technical publications. The above data are available to the public and may be inspected during normal business hours at the U.S. Environmental Protection Agency, Region II, Water Management Division, 26 Federal Plaza, New York, New York 10278.

V. Project Review

When the EPA Administrator publishes his determination for a sole or principal drinking water source, no commitment for Federal financial assistance may be may if the Administrator finds that the Federally-assisted project may contaminate the aquifer through a recharge zone so as to create a significant hazard to public health . . . Safe Drinking Water Act section 1424(e), 42 U.S.C. 300h–3(e). In many cases, these Federally-assisted projects would also be analyzed in an "Environmental Impact Statement" (EIS) under the National Environmental Policy Act (NEPA), 42 U.S.C. 4332(2)(C). All EISs, as well as any other proposed Federal actions affecting an EPA program or responsibility, are required by Federal law (under the so-called "NEPA/309" process) [1] to be reviewed and commented upon by the EPA Administrator. Therefore, in order to streamline EPA's review of the possible environmental impacts on designated aquifers, when an action is analyzed in an EIS, the two reviews will be consolidated, and both authorities will be cited. The EPA review (under the Safe Drinking Water Act) of Federally-assisted projects potentially affecting sole or principal source aquifers, will be included in the EPA review (under the "NEPA/309" process) of any EIS accompanying the same Federally-assisted project. The letter transmitting EPA's comments on the final EIS to the lead agency will be the vehicle for informing the lead agency of EPA's actions under section 1424(e).

All Federally-assisted proposed projects will be reviewed, within the New Jersey Coastal Plain Area (Counties of Monmouth, Burlington, Ocean, Camden, Gloucester, Atlantic, Salem, Cumberland and Cape May, and portions of Mercer and Middlesex Counties, New Jersey (as delineated on maps included in the petition), and that portion of the streamflow source zone which lies within two miles of the Delaware River in the States of New Jersey (in Mercer, Hunterdon, Sussex and Warren Counties), Delaware (in New Castle County), Pennsylvania (in Delaware, Philadelphia, Bucks, Monroe, Northampton, Pike and Wayne Counties) and New York (in Delaware, Orange and Sullivan Counties) (as delineated on maps included in the public record). Outside the New Jersey Coastal Plain Area and further than two miles from the Delaware River in the streamflow source zone, only those Federally-assisted proposed projects requiring the preparation of an EIS will be reviewed. The Agency has chosen a two-mile limit for the project review area along the Delaware River based on the climate and hydrologic setting of the area. The two-mile distance is consistent with the two-mile review radius included in the EPA guidelines for Ground-Water Classification and is protective of human health.

VI. Summary and Discussion of Public Comments

There has been much controversy over the possible designation of this aquifer system. The majority of the comments from the original 1979 public hearings were in direct opposition to such a designation. More than half of all responses received were against designation. Several commenters felt constrained by the original comment period and thereby requested an extension. EPA complied with this request on two occasions, once by announcing at the four public hearings it held throughout the area under consideration that the agency had extended the formal comment period from May 14, 1979, to December 31, 1979, and again in a May 19, 1983 Federal Register Notice that announced the availability of additional information and extension of the public comment period to July 15, 1983. Although a number of ground-water protection measures are available at the Federal, State and local level, none of these, either individually or collectively, permit EPA to act as directly as would a sole source aquifer designation in the review and approval of Federally-assisted projects. In addition, EPA feels that the sole source project review process will foster integration rather than duplication of environmental review efforts. Memoranda of Understanding have been negotiated with various Federal agencies with the purpose of streamlining the review process and minimizing project delays. Most of the commenters expressed concern that a

[1] 42 U.S.C. § 7609 requires EPA to conduct this review. The "309" in a "NEPA/309" derives from the original source of this general requirement: Section 309 of the Clean Air Act.

designation would be a duplication of efforts already existing on the state and local levels. Some commenters felt that a sole source aquifer designation would give EPA the power to reject any applications for Federally-funded projects indiscriminately and to delay any project underway. Another main concern of many commenters was that a designation would cause a strong negative economic impact on the area in question and curtail needed development, thus eliminating jobs. EPA is sympathetic to the concerns of the commenters; however, the Agency feels that a sole source aquifer designation would not interfere with economic development. Federal financial assistance will be withheld only in those instances where it is determined that a proposed project may contaminate the acquifer so as to create a significant hazard to public health and no acceptable remedial measures are available to prevent the potential hazard.

Dated: June 16, 1988.

Lee M. Thomas,

Administrator.

[FR Doc. 88-14293 Filed 6-23-88; 8:45 am]

BILLING CODE 6560-50-M

[OPTS-59845; FRL-3404-5]

Toxic and Hazardous Substances; Certain Chemicals Premanufacture Notices

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: Section 5(a)(1) of the Toxic Substances Control Act (TSCA) requires any person who intends to manufacture or import a new chemical substance to submit a premanufacture notice (PMN) to EPA at least 90 days before manufacture or import commences. Statutory requirements for section 5(a)(1) premanufacture notices are discussed in the final rule published in the Federal Register of May 13, 1983 (48 FR 21722). In the Federal Register of November 11, 1984 (49 FR 46066) (40 CFR 723.250), EPA published a rule which granted a limited exemption from certain PMN requirements for certain types of polymers. Notices for such polymers are reviewed by EPA within 21 days of receipt. This notice announces receipt of nine such PMNs and provides a summary of each.

DATES: Close of Review Periods:

Y 88-192, 88-193—June 5, 1988.
Y 88-194—June 7, 1988.
Y 88-195—May 17, 1988.
Y 88-196—June 8, 1988.
Y 88-197—June 14, 1988.
Y 88-198—June 15, 1988.
Y 88-199—June 10, 1988.
Y 88-200—June 23, 1988.

FOR FURTHER INFORMATION CONTACT: Stephanie Roan, Premanufacture Notice Management Branch, Chemical Control Division (TS-794), Office of Toxic Substances, Environmental Protection Agency, Rm. E-611, 401 M Street SW., Washington, DC 20460 (202) 382-3725.

SUPPLEMENTARY INFORMATION: The following notice contains information extracted from the non-confidential version of the submission provided by the manufacturer on the PMNs received by EPA. The complete non-confidential document is available in the Public Reading Room NE-G004 at the above address between 8:00 a.m. and 4:00 p.m., Monday through Friday, excluding legal holidays.

Y 88-192

Manufacturer. Confidential.
Chemical. (G) Hydroxy function acrylic resin.
Use/Production. (S) Coatings. Prod. range: Confidential.

Y 88-193

Manufacturer. Confidential.
Chemical. (G) Polyurethane resin.
Use/Production. (S) Coating. Prod. range: Confidential.

Y 88-194

Manufacturer. Sybron Chemicals Inc.
Chemical. (G) Copolymer of aliphatic esters of 2-propenoic acid with homocyclic and heterocyclic aromatic vinyl compounds, reaction production wiyh aliphatic polyam ne.
Use/Production. (G) Waste and process water purification. Prod. range: Confidential.

Y 88-195

Manufacturer. Confidential.
Chemical. (G) Dibasic acid polyol polyester.
Use/Production. (G) Used in coatings. Prod. range: Confidential.

Y 88-196

Manufacturer. Confidential.
Chemical. (S) Rosin, dicyclopentadiene, dimer fatty acid polymer.
Use/Production. (S) Printing ink vehicles. Prod. range: 3,000,000-3,700,000 kg/yr.

Y 88-197

Manufacturer. Reichhold Chemicals, Inc.
Chemical. (G) Sunflower oil alkyd.
Use/Production. (S) Architectural trade sales coating. Prod. range: Confidential.

Y 88-198

Manufacturer. Confidential.
Chemical. (G) Aliphatic polyester urethane.
Use/Production. (G) Coatings. Prod. range: Confidential.

Y 88-199

Manufacturer. C.J. Osborn.
Chemical. (G) Polyester.
Use/Production. (S) Pigmented and clear finish. Prod. range: Confidential.

Y 88-200

Manufacturer. Confidential.
Chemical. (G) Styrene/acrylic copolymer.
Use/Production. Coatings and inks. Prod. range: Confidential.

Date: June 13, 1988.

Steve Newburg-Rinn,

Acting Chief, Public Data Branch, Information Management Division, Office of Toxic Substances.

[FR Doc. 88-14292 Filed 6-23-88; 8:45 am]

BILLING CODE 6560-50-M

FEDERAL COMMUNICATIONS COMMISSION

Public Information Collection Requirement Submitted to Office of Management and Budget for Review

June 16, 1988.

The Federal Communications Commission has submitted the following information collection requirement to OMB for review and clearance under the Paperwork Reduction Act of 1980 (44 U.S.C. 3507).

Copies of this submission may be purchased from the Commission's copy contractor, International Transcription Service, (202) 857-3800; 2100 M Street NW., Suite 140, Washington, DC 20037. For further information on this submission contact Judy Boley, Federal Communications Commission, (202) 632-7513. Persons wishing to comment on this information collection should contact Yvette Flynn, Office of Management and Budget, Room 3235 NEOB, Washington, DC 20503, (202) 395-3785.

OMB Number: 3060-0025.
Title: Application for Restricted Radiotelephone Operator Permit—Limited Use.
Form Number: FCC 755.
Action: Revision.
Respondents: Individuals or households.

REFERENCE NO. 7

NUS CORPORATION AND SUBSIDIARIES — TELECON NOTE

CONTROL NO:	DATE:	TIME:
02-8901-20	2/14/89	1045

DISTRIBUTION: GOW Natural Resources File

BETWEEN:	OF:	PHONE:
Ed Knicely	Gloucester City Water Dept.	(609) 456-0165

AND: Gary Rotelle

DISCUSSION:

Re: Drinking water Gloucester City

- Gloucester City Water Dept. provides all potable water for Gloucester City Residents
- serves 13,400 people
- 4 wells are in use:
  - GCWD 40
  - " 41
  - " 42
  - " 43
- They are not tied in to either the Camden, Mt. Ephraim, or New Jersey Water Companies, but emergency hook-ups are available to each of these

ACTION ITEMS:

NUS 067 REVISED 0685

REFERENCE NO. 8

WEST DEPTFORD TOWNSHIP

MUNICIPAL BUILDING
GROVE AVENUE AND CROWN POINT ROAD
THOROFARE, NEW JERSEY 08086
PHONE 845-4004

July 11, 1988

NUS
1090 King George's Post Road
Suite 1103
Edison, New Jersey 08837

Attention: Laura La Forge

Dear Ms. La Forge:

Following is a list of West Deptford Township's wells which serve a population of 18,500 residents:

Well	Depth	Year Drilled	Diameter	Yield
#3, Jessup Rd.	243 ft.	1957	12"	450 GPM
#4, Parkville Rd.	252 ft.	1957	8"	350 GPM
#5, Kings Highway	450 ft.	1973	12"	1000 GPM
#6, Red Bank Avenue	371 ft.	1973	12"	390 GPM
#7, Academy Ave.	370 ft.	1981	12"	600 GPM
#8, Parkville Rd.	350 ft.	1982	12"	1050 GPM

Also, enclosed you will find a map showing the location of these wells. Please contact me if you require any further information.

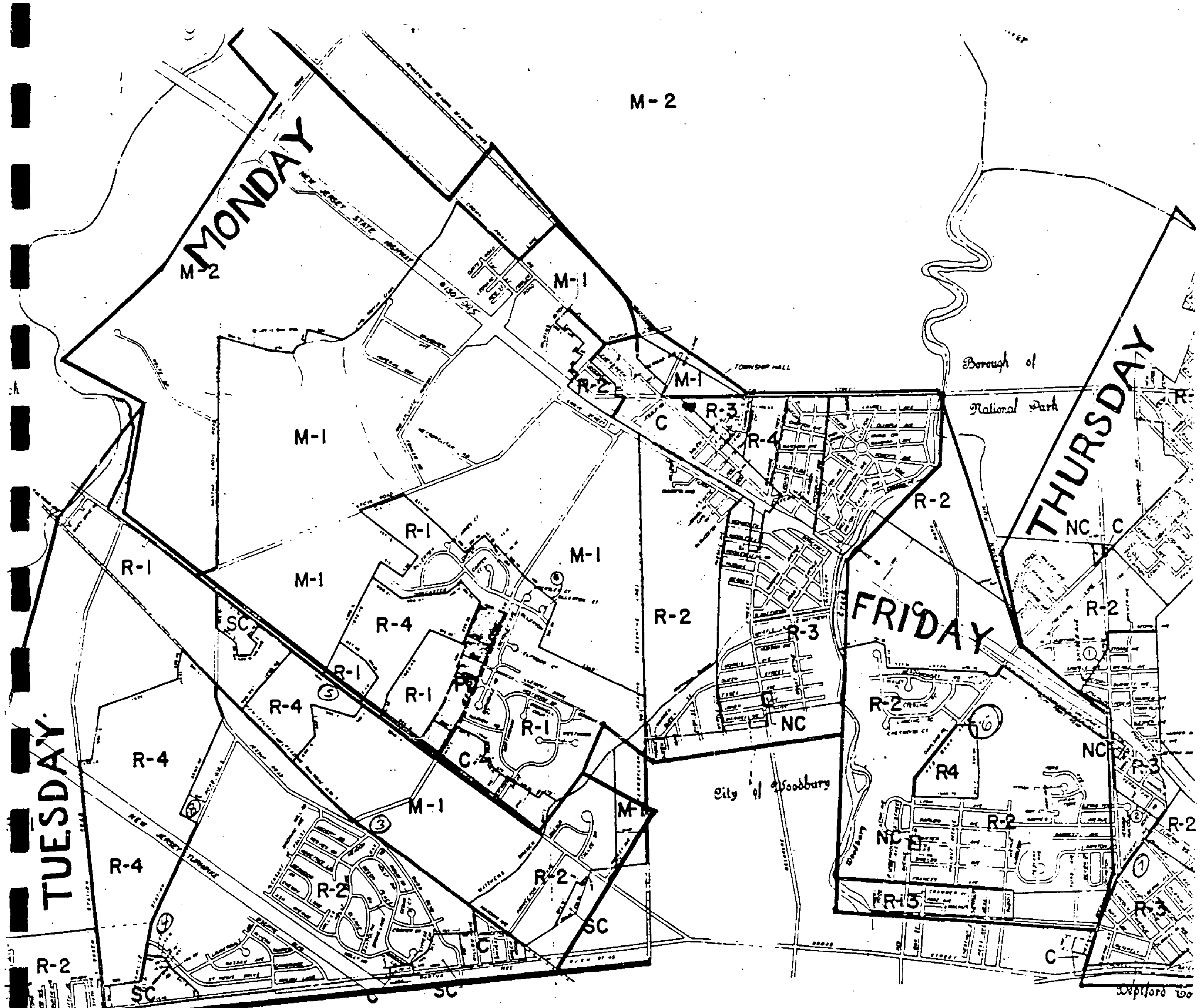
Sincerely,

Edward J Phelps III

Edward J. Phelps, III
Superintendent
Water and Sewer Department

EJP:mbr

Enclosure


M-2
MONDAY
TUESDAY
THURSDAY
FRIDAY
M-2
M-1
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NC
NC
NC
NC
Township Hall
Borough of
National Park
City of Woodbury
New Jersey State Highway
New Jersey Turnpike

REFERENCE NO. 9

NUS CORPORATION

6051-C
02-8803-26

TELECON NOTE

CONTROL NO:	DATE:	TIME:
02-8803-26	June 27, 1988	1445

DISTRIBUTION:

Deptford Plating Co., Inc files - CUR

BETWEEN:	OF:	PHONE:
Mr. Bill Beckett	Bellmawr Boro Water Dept - operator	(609)931-5721

AND:

Thomas Varner (NUS)

DISCUSSION:

Mr. Beckett returned my call to the Bellmawr Boro Water Department on 6/24/88. He told me that Bellmawr Boro has a population of 9522 which depend on groundwater from 4 public supply wells which are completed in the Magothy and/or Raritan Formations. He said the wells are about 580 feet deep, and are overlain by a thick, tight clay layer. He said 2 wells are located on Warren Ave by a water tower, and the other 2 are located on Bell Rd. near another water tower. Well Nos. 3 and 4 are rated at 500 gpm, and nos. 5 and 6 at 1000 gpm. The two water towers hold 750,000 gallons of water, combined. He said any technical questions could be answered by Mr. Sansone, the Superintendent, or Mr. Mark Huff, the assistant Superintendent.

TAV 6/27/88

ACTION ITEMS:

NUS 067 REVISED 0581

REFERENCE NO. 10

NUS CORPORATION

3128-C
02-8803-26

TELECON NOTE

CONTROL NO:	DATE:	TIME:
02-8803-26	6/24/88	1450

DISTRIBUTION:

Deptford Plating Co., Inc. - COR

BETWEEN:	OF:	PHONE:
Mr. Ron Eltner	NJ. Water Co.	(609) 547-1700

AND:

Thomas Varner (NUS)

DISCUSSION:

Mr. Eltner said that the Runnamede Wells and the Gloucester Township wells (which are within 3 miles of the site - AV) are part of an interconnected system which uses a common pipe grid to distribute the water. This system serves approximately 260,000 people from 50 wells. This system serves Camden County: all of 14 municipalities and part of another 6. I asked him if affected water were to enter the system at one station could it be consumed by somebody else near another station, and he said yes.

ACTION ITEMS:

REFERENCE NO. 11

NUS CORPORATION TELECON NOTE

CONTROL NO:	DATE:	TIME:
02-8901-04	2/14/89	3:30 p.m.

DISTRIBUTION:

Campbell Soup Company (Market St.)

BETWEEN:	OF:	PHONE:
John Rattie	Delaware River Basin Commission	(609) 883-9500

AND:

Tammy Marquart (NUS)

DISCUSSION:

Mr. Rattie said the Delaware River is tidal in the Camden area. In the Camden area the river is a large shipping area. The river is used for recreational boating, but no swimming.

For reference, the Ben Franklin Bridge is located at river mile 100.1 and the Cape is 0. He said the only drinking water intake is by ~~Philadelphia~~ City of Philadelphia at Tarsdale - river mile 110.5. Mr. Rattie mentioned the following industrial intakes: Roman Haas at river mile 106.2 (Phila.), Georgia Pacific at river mile 104.3 (NJ), another industrial intake at river mile 97.8 (NJ), Texaco at River mile 94.0 (NJ), PSE&G of Burlington at river mile 117.2 (NJ) and Stepan Chemical Co. at river mile 127.2 (NJ).

Jenny Marquart 2/14/89

ACTION ITEMS:

NUS 067 REVISED 0581

REFERENCE NO. 12

United States Department of the Interior
FISH AND WILDLIFE SERVICE
P.O. Box 534
705 White Horse Pike
Absecon, New Jersey 08201
(609) 646-9310

February 7, 1989

Ms. Valerie Mathers
NUS Corporation
1090 King Georges Post Road, Suite 100
Edison, New Jersey 08837

Dear Ms. Mathers:

This letter is in response to your January 13, 1989 request to the Fish and Wildlife Service (Service) for information on the presence of federally listed endangered or threatened species within a two-mile radius of 16 potentially hazardous waste sites in Camden County, New Jersey.

This response is provided pursuant to the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) to ensure the protection of endangered and threatened species and does not address other Service concerns for fish and wildlife resources. If these sites are formally ranked on the National Priority List we recommend that future work plans for the sites be reviewed by the Biological Technical Assistance Group, an interagency technical assistance forum for project managers set up by the U.S. Environmental Protection Agency (Region II). Furthermore, if remedial actions are required at these sites, we recommend that the Environmental Impacts Branch be coordinated with to ensure that all "applicable or relevant and appropriate requirements" (ARARs) are complied with in the implementation of cleanup activities, including the Fish and Wildlife Coordination Act (48 Stat. 401, 16 U.S.C. 661 et seq.), the River and Harbor Act of 1889 (33 U.S.C. 401,403), and the Clean Water Act of 1977 (U.S.C. 1344 et seq.).

Except for occasional transient species, no federally listed or proposed threatened or endangered species are known to occur within a two-mile radius of the following sites:

Aluminum Shapes Inc.
Delair, New Jersey

Borden Chemical Printing Ink
Camden, New Jersey

Campbell Soup Company
(both locations)
Camden, New Jersey

CITGO Petroleum Corp.
Petty's Island, New Jersey

G&W Natural Resources Group
Gloucester City, New Jersey

GAF Corporation
Gloucester City, New Jersey

Georgia Pacific Corp. Gypsum Div.
Delair, New Jersey

Grow Group Inc.
Pennsauken, New Jersey

Clement "Coverall" Co.
Camden, New Jersey

Elco Corp. Varicircuits Div.
Pennsauken, New Jersey

United Steel and Wire Co., Inc.
Pennsauken, New Jersey

Kelbros Inc.
Camden, New Jersey

Kramer Chemicals Inc.
Camden, New Jersey

S W Electronics and Mfr. Corp.
Cherry Hill, New Jersey

If additional information on listed or proposed species becomes available or if a significant time elapses before project activities are undertaken, this determination may be reconsidered.

The Dynasil Corporation of America site, located on Cooper Road in Berlin, New Jersey occurs within a two-mile radius of a known occurrence of swamp pink (Helonias bullata), a threatened species. This occurrence is located in Evesham Township, Burlington County. Without a description of any remedial actions proposed for the site, the Service is unable to assess any impacts, if any, which may occur to this plant species. When such information becomes available, you may wish to contact this office again.

In addition to species of federal concern, species listed by the State of New Jersey may occur within the study areas. To confirm the presence of these species, please contact the following offices:

Mr. Thomas Breden
Natural Heritage Program
Division of Parks and Forestry
CN 404
Trenton, New Jersey 08625
(609/984-0097)

Ms. JoAnn Frier-Murza
Endangered and Nongame Species Program
CN 400
Trenton, New Jersey 08625
(609/292-9101)

Information contained in this letter and additional information obtained from the aforementioned State sources represents the public interest for fish and wildlife resources and should warrant full consideration in the preparation of the Preliminary Assessments. The Service requests that no part of this letter be taken out of context and if reproduced, the letter should appear in its entirety.

A compilation of federally designated endangered and threatened species in New Jersey is enclosed for your information. Please contact Lynn Wilson of my staff should you have any questions or require further assistance.

Sincerely,

Clifford G. Day
Supervisor

Enclosure

REFERENCE NO. 13

NUS CORPORATION — TELECON NOTE

CONTROL NO:	DATE:	TIME:
02-5902-02	FEB. 15, 1989	1412

DISTRIBUTION:

GAF Corp File - COR

BETWEEN:	OF:	PHONE:
Mr. John Rattie	Delaware River Basin Commission	(609) 883-9500

AND:

Thomas Varner (NUS)

DISCUSSION:

I asked Mr. Rattie if there were any agricultural intakes along the Delaware River between river mile 90 and 110. He said that their listing showed none. He said the water in that region is not likely to be used for agriculture because of its quality.

TAV 2/15/89

ACTION ITEMS:

REFERENCE NO. 14

Surface Water Classifications

Surface Water Quality Standards
N.J.A.C. 7:9-4

Index C-
Surface Water Classifications of the Delaware River Basin

May 1985

State of New Jersey Department of Environmental Protection/Division of Water Resources

2. Primary and secondary contact recreation;

3. Maintenance, migration and propagation of the natural and established biota; and

4. Any other reasonable uses.

7:9-4.13 Designated uses of mainstem Delaware River and Delaware Bay (Summarized From the DRBC "Administrative Manual; Part III; Basin Regulations; Water Quality; Including Amendments Through June 29, 1983")

(a) The designated uses for Zone 1C, 1D, and 1E are:

1. Agricultural, industrial and public water supply after reasonable treatment;

2. Wildlife;

3. Maintenance and propagation of resident gamefish and other aquatic biota;

4. Spawning and nursery habitat for anadromous fish;

5. Passage of anadromous fish;

6. Primary and secondary contact recreation.

(b) The designated uses for Zone 2 are:

1. Agricultural, industrial and public water supply after reasonable treatment;

2. Wildlife;

3. Maintenance and propagation of resident gamefish and other aquatic biota;

4. Passage of anadromous fish;

5. Primary contact recreation from R.M. 133.4 to R.M. 117.81;

6. Secondary contact recreation from R.M. 133.4 to R.M. 108.4; and

7. Navigation.

(c) The designated uses for Zone 3 are:

1. Agricultural, industrial and public water supply after reasonable treatment;

2. Wildlife;

3. Maintenance of resident fish and other aquatic biota;

4. Migration of anadromous fish;

5. Secondary contact recreation; and

6. Navigation.

(d) The designated uses for Zone 4 are:

1. Industrial water supply after reasonable treatment;

2. Wildlife;

3. Maintenance of resident fish and other aquatic biota;

4. Migration of anadromous fish;

5. Secondary contact recreation; and

6. Navigation.

(e) The designated uses for Zone 5 are:

1. Industrial water supply after reasonable treatment;

2. Wildlife;

3. Migration of anadromous fish;

4. Maintenance of resident fish and other aquatic biota;

5. Propagation of resident fish from R.M. 70.0 to R.M. 48.2;

6. Secondary contact recreation;

7. Primary contact recreation from R.M. 59.5 to R.M. 48.2; and

8. Navigation.

(f) The designated uses for Zone 6 are:

1. Industrial water supply after reasonable treatment;

Surface Water Quality Standards
N.J.A.C. 7:9-4

May 1985

State of New Jersey, Department of Environmental Protection/Division of Water Resources

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

Surface Water Quality Standards

Adopted:	April 29, 1985 by Robert E. Hughey, Commissioner, Department of Environmental Protection
Authority:	N.J.S.A. 13:1D-1 et seq., 58:10A-1 et seq., and 58:11A-1 et seq.
Effective Date:	May 20, 1985
Expiration Date pursuant to Executive Order No.66 (1978):	May 20, 1990

DATE 4/29/85

Robert E. Hughey

ROBERT E. HUGHEY, Commissioner
Department of Environmental Protection

(Allamuchy) - All tributaries to the Pond and to its outlet stream that are located entirely with the boundaries of Allamuchy State Park	FW1
DELAWANNA CREEK (Delaware) - Entire length	FW2-TM
DELAWARE RIVER	
MAIN STEM (Interstate Waters - Classifications from Delaware River Basin Commission (DRBC))	
(State Line) - That portion of DRBC's Zone 1C from the New York-New Jersey state line to the proposed axis of the Tocks Island Dam at River Mile 217.0	Zone 1C
(Tocks Island) - Proposed axis of Tocks Island Dam at River Mile 217.0 to the mouth of the Lehigh River at Easton, Pennsylvania, at River Mile 183.66	Zone 1D
(Easton, Pa.) - Mouth of the Lehigh River at River Mile 183.66, to the head of tide at the Trenton-Morrisville Toll Bridge, Trenton at River Mile 133.4	Zone 1E
(Trenton) - Head of tide at the Trenton-Morrisville Bridge, Trenton, River Mile 133.4 to below the mouth of Pennypack Creek, Pennsylvania at River Mile 108.4	Zone 2
(Philadelphia) - River Mile 108.4 to below the mouth of Big Timber Creek, New Jersey, at River Mile 95.0	Zone 3
(Gloucester) - River Mile 95.0 to the Pennsylvania-Delaware state line at River Mile 78.8	Zone 4
(Marcus Hook) - Pennsylvania-Delaware state line at River Mile 78.8 to Liston Pt., Delaware at River Mile 48.2	Zone 5
(Liston Point) - Delaware Bay from Liston Point, Delaware at River Mile 48.2 to River Mile 0.0 at the intersection of the centerline of the navigation channel and a line between Cape May Light and the tip of Cape Henlopen, Delaware	Zone 6 (C1)
TRIBUTARIES, DELAWARE RIVER	
(Holland) - Entire length	FW2-TP(C1)
(Port Jervis) - Unnamed or unlisted direct tributaries that are north of Big Timber Creek, are outside of the Pinelands Protection and Preservation Areas, and are not mapped as C1 waters by the Department	FW2-NT
(Titusville) - Unnamed tributaries through Washington Crossing State Park	FW2-NT(C1)
(Brooklawn) - Unnamed or unlisted direct tributaries, south of Big Timber Creek and north of Oldman's	FW2-NT/SE2

REFERENCE NO. 15

LAND USE OVERLAY
SHEET 31

BUREAU OF GEOLOGY AND TOPOGRAPHY
KEMBLE WIDMER, STATE GEOLOGIST
1978

LEGEND

URBAN AND BUILT-UP LAND

11 RESIDENTIAL
12 COMMERCIAL & SERVICES
13 INDUSTRIAL
14 TRANSPORTATION, COMMUNICATION & UTILITIES
15 INDUSTRIAL & COMMERCIAL COMPLEXES
16 MIXED URBAN & BUILT-UP LAND
17 OTHER URBAN OR BUILT-UP LAND

AGRICULTURAL LAND

21 CROPLAND & PASTURE
22 ORCHARDS & HORTICULTURAL AREAS

FOREST LAND

41 DECIDUOUS
42 EVERGREEN
43 MIXED

WATER

51 STREAMS & CANALS
52 LAKES
53 RESERVOIRS
54 BAYS & ESTUARIES

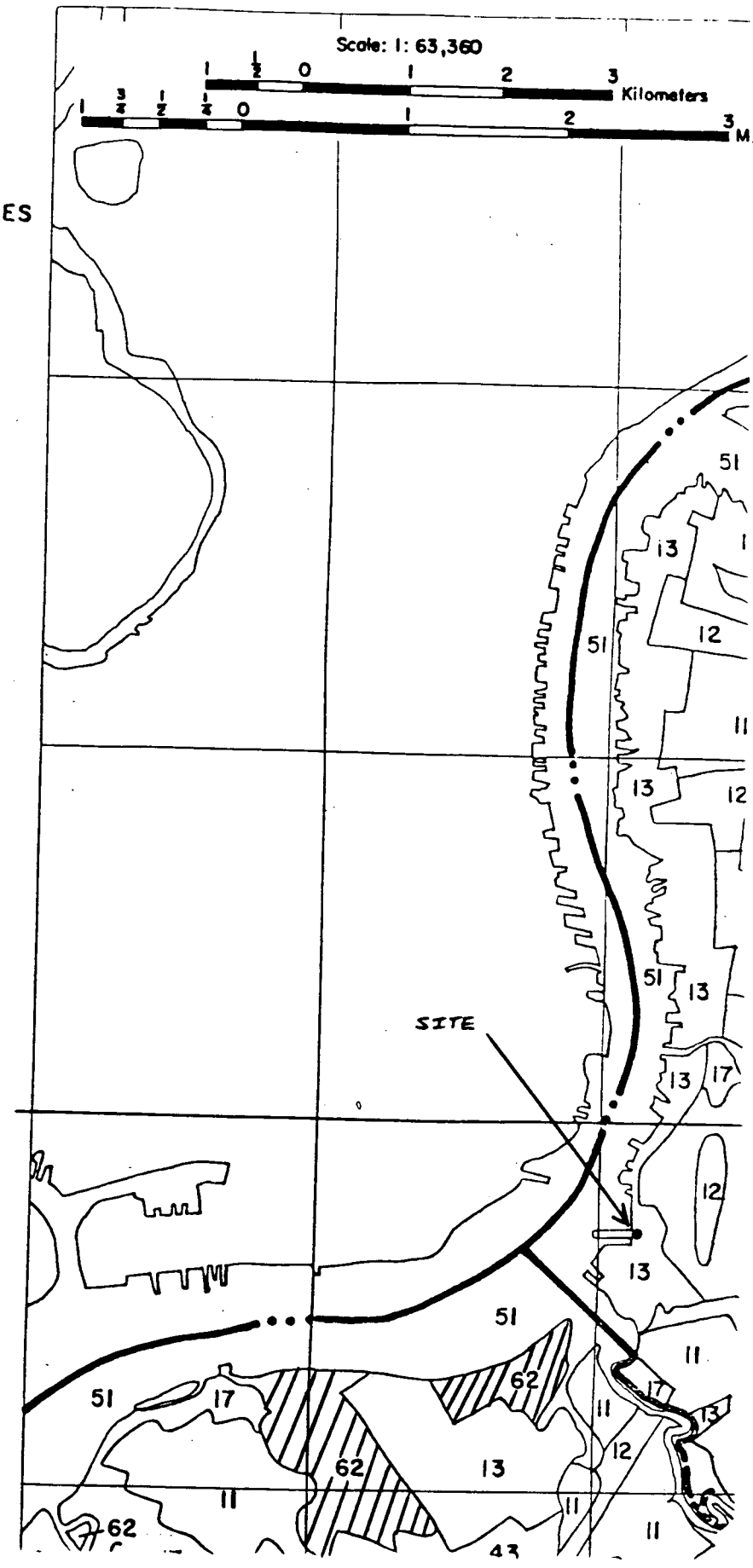
WETLAND

61 FORESTED WETLAND
62 NONFORESTED WETLAND

BARREN LAND

72 BEACHES
73 SAND OTHER THAN BEACHES
74 BARE EXPOSED ROCK
75 STRIP MINES, QUARRIES, & GRAVEL PITS

— Five acre coastal wetlands within 2 miles of the site.



REFERENCE NO. 16

NUS CORPORATION

TELECON NOTE

CONTROL NO: 02-8902-02 DATE: Feb. 21, 1989 TIME: 10:48

DISTRIBUTION:

GAF Corp - COR

BETWEEN: Ms. Carol Granbart OF: NJDEP/Bureau of Case Mgt. PHONE: (609) 633-0701

AND: Thomas Varner NUS

DISCUSSION:

I called Ms. Granbart to try and obtain waste source information associated with this site. She looked through the Preliminary Assessment completed by ~~Gerry~~ TV 4/21/89 Whittaker as we talked. She told me that the P.A. Clare said there were 2 spills at the site: 300-400 gallon of PCB-contaminated liquid from a damaged transformer and a 2000 gallon spill of No. 6 fuel oil, that reached the storm sewer. She said oily substance was later found in an interceptor sewer. She said there was no indication of the exact locations of these spills, but that they had been cleaned up to the satisfaction of the Department (no further action). She said GAF had 2 cooling water discharges (non-contact) to the Delaware River. She also said that a RCRA inspection in Sept. 1987 did not note any visible contamination and that all hazardous waste materials had been removed at that time. She said there was no documentation concerning the lagoon-like impoundment mentioned in the P.A. narrative, nor were any problems documented concerning tanks or drum storage.

ACTION ITEMS:

TAV 2/21/89

NUS 267 REV SEP 2581

REFERENCE NO. 17

March 6, 1984

Mr. Richard A. Baker, Chief
Permits Administration Branch
U. S. Environmental Protection Agency
26 Federal Plaza, Room 432
New York, New York 10007

Reference: GAF Corporation, Gloucester City, N. J. Plant
NPDES Permit No. NJ 0005371
Suspension of Operations

Dear Mr. Baker:

All operations at the referenced facility are being temporarily discontinued, and there will be no further discharges until the plant is reactivated.

Please send the pre-printed Discharge Monitoring Report forms hereafter to my attention at the above address, instead of to the Gloucester City Plant Manager. The DMR's, reporting no discharge, will be submitted quarterly from here to your office and to the N. J. Division of Water Resources.

Very truly yours,

GAF CORPORATION

H. J. Holloway

H. J. Holloway

HJH:ags

cc: Water Quality Management Element
N. J. Division of Water Resources
CN-029 Trenton, N. J. 08625

bc: E. J. Flood, S. Graziano, S. J. Stempien, J. F. Wright, T. J. Zickell

REFERENCE NO. 18

GAF CORPORATION
1361 Alps Road
Wayne NJ 07470
201 628 3000

N.J. Department of Environmental Protection
Division of Waste Management
CN 028
Trenton, NJ 08625

October 3, 1985

Gentlemen:

Attached is waste manifest number NJA0027698 for the transport and storage by Eastern High Voltage, Inc. of PCB liquids and solids from GAF's Gloucester City, N.J. facility.

Very truly yours,

H. J. Holloway

H. J. Holloway

HJH/db

cc: J. Wright - Gloucester City

Attachment

bcc: Wayne
F. Belardo
S. Graziano
B. Lloyd

VHW-001 (REV. 9-84)

State of New Jersey
Department of Enviromental Protectio
Division of Waste Management
CN 028, Trenton, NJ 08625

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2000-0404. Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No / Manifest Document No.: N J D 0 4 3 9 9 2 6 9 6 / 2 7 6 9 8

2. Page 1 of

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: GAF Corp. 1361 Alps Road Wayne NJ 07470

4. Generator's Phone (201) 628 3000

A. State Manifest Document Number: NJA0027698

B. State Gen. ID: Charles & Water St. Gloucester NJ 08030

5. Transporter 1 Company Name: Eastern High Voltage, Inc.

6. US EPA ID Number: [illegible]

C. State Transporter's ID: NJSW7S8349-

7. Transporter 2 Company Name:

8. US EPA ID Number:

D. Transporter's Phone: 609-890-8300

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address: Eastern High Voltage, Inc. 11A Marlon Drive [illegible]

10. US EPA ID Number: [illegible]

G. State Facility's ID:

H. Facility's Phone:

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Polychlorinated Biphenyls [illegible] ORM-E [illegible]	[illegible]	[illegible]	[illegible]	P	X727
b. [illegible]	001	DM	[illegible]40	G	[illegible]
c. POLYCHLORINATED BIPHENYLS [illegible] ORM-E UN2315	001	TP	01,090	P	X727
d.					

J. Additional Descriptions for Materials Listed Above

a. Soil, rags

b. Askarel + Kerosene

c. 100 KVA TRANS CAR 459

d.

K. Handling codes for Wastes Listed Above

a. S01

b. S01

c.

d.

15. Special Handling Instructions and Additional Information

[illegible]

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations, and all applicable State laws and regulations.

Printed/Typed Name: John F. Wright Supt. [illegible]
Signature: John F. Wright
Date: Month Day Year 09/12/[illegible]

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: [illegible]
Signature: [illegible]
Date: Month Day Year [illegible]

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name:
Signature:
Date: Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: W.A. WILSON, V.P. OPERATIONS
Signature: [illegible]
Date: Month Day Year

In case of an emergency or spill immediately call the State [illegible] N.J. Dept. of Environmental Protection (609) 292-7172 (Day) (609) 292-5560 (Night)

EPA Form 8700-22 (3-84)

3 – TSD MAIL TO – GENERATOR

HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

...se print or type. *(Form designed for use on elite (12-pitch) typewriter.)* *Form Approved. OMB No. 2000-0404. Expires 7-31-86*

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: NJD043292606 — Manifest Document No.: [illegible]
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: GAF CORPORATION, CHARLES + WATER STREETS, GLOUCESTER CITY N J 08030
4. Generator's Phone (609) 456-2398

A. State Manifest Document Number: CWMA 236255

B. State Generator's ID: SAME

5. Transporter 1 Company Name: S-J TRANSPORTATION CO.
6. US EPA ID Number: NJD071629976

C. State Transporter's ID: [illegible]

D. Transporter's Phone: (609) [illegible]

7. Transporter 2 Company Name:
8. US EPA ID Number:

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address: CHEMICAL WASTE MANAGEMENT, INC., Emelle Facility, Alabama Highway 17 at Mile Marker 163, Emelle, Alabama 35459
10. US EPA ID Number: ALD000622464

G. State Facility's ID

H. Facility's Phone: 205/652-9721

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE POLYCHLORINATED BIPHENYLS (PCB CONTAMINATED SOIL) ORM-E UN-2315 — CWM Profile Number E65825	001	ROLL OFF CM	12	Y	N/A
b. CWM Profile Number					
c. CWM Profile Number					
d. CWM Profile Number					

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above: a. b. c. d.

15. Special Handling Instructions and Additional Information: I CERTIFY THAT NO ABSORBENT HAS BEEN ADDED TO THE ABOVE WASTE WHICH WOULD PROHIBIT ITS BEING LANDFILLED PER RCRA SECTION 3004(c)

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: H. J. HOLLOWAY — Signature: H. J. Holloway — Month Day Year: 04 29 86

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Bruce Nichols — Signature: Bruce Nichols — Month Day Year: 04 29 86

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name — Signature — Month Day Year

19. Discrepancy Indication Space

REFERENCE NO. 19

NUS CORPORATION
SUPERFUND DIVISION

PROJECT NOTES

TO: GAF Corp. Final Draft Preliminary Assessment

DATE: March 8, 1989

FROM: Thomas Varner

COPIES:

SUBJECT: Use of Reference No. 19

REFERENCE:

This reference is provided in order to document that the industrial-use wells at the G&W Natural Resources Group are currently inactive, as noted in Table 1 of this report.

TAV 3/9/89

NUS 443A 58 1182

NJDEP RCRA EVALUATION FORM
SUMMARY SHEET

CURRENT RCRA STATUS

Facility Name: Gulf + Western Natural Resources NJPDES No. NJ0065061

Address Foot of Water St. EPA ID#: NJD002347664

Gloucester City, NJ 08030 Inspection Date: 9/24/85

County: Camden Reviewer: Michele Rawleigh

Current RCRA status:

____ Active RCRA TSD (specify activities)

_____

_____

_____

✓ Not active TSD DE-LISTED Sept. 9, 1983.

____ Waste not hazardous by process or characteristics

____ Waste not discharged to TSD after November 1980

____ Portions of facility subject to corrective measures (specify activities)

_____

_____

_____

FACT SHEET
FOR THE NJPDES PERMIT TO DISCHARGE
INTO THE GROUND WATERS OF THE STATE

Name and Address of Applicant:

Gulf and Western Realty Corp.
1 Gulf and Western Plaza
New York, New York 10023

Name and Address of Facility Where Discharge Occurs:

Gulf & Western Natural Resources Group
Foot of Water Street
Gloucester City, Camden County

Receiving Water:
Ground Waters of the State. The facility overlies the Quaternary Age Cape May Formation which was deposited over the Raritan-Magothy Fm. of Cretaceous Age at this locale.

Description of Facility:
The facility formally terminated operations on November 30, 1983 and is in the process of being decommissioned. A sampling plan documenting the nature and extent of contamination by hazardous substances has not been approved by the Environmental Cleanup and Responsibilty Act (ECRA) program to date.

Description of Discharge:
Titanium dioxide (TiO_2) was produced by reacting titanium slag (ilmenite ore) with concentrated (95.5%) sulfuric acid (H_2SO_4). Approximately 3 tons of acid are required to produce 1 ton of TiO_2 pigment. Most of the acid was carried through the process and contained in the plant effluent as either free H_2SO_4 or sulfates of the other metals in the titanium slag (mainly Fe, Al, and Mg). Undigested ore and TiO_2 were also contained in the effluent which was ultimately discharged to a settling basin. This settling basin was filed for as TO2 (surface impoundment-treatment). The basin was later re-classified by EPA and DEP as a tidal basin and part of the Delaware River. The site was de-listed as land disposal and obtained a NJPDES/DSW permit. Additionally the facility claims that they did not store hazardous waste for longer than 90 days and received "small quantity generator" status from DWM on September 9, 1983.

The neutralization process required under the DSW permit generated a gypsum by-product which was land disposed onsite without a DGW permit. Sludge from the settling basin was also disposed of onsite. Analyses reveal that this material is not EP Toxic for metals.

Permit Conditions:
A NJPDES/DGW permit is likely to be issued upon completion of ECRA requirements.

REFERENCE NO. 20

NUS CORPORATION
SUPERFUND DIVISION

PROJECT NOTES

TO: GAF Corp. Final Draft Preliminary Assessment

DATE: March 8, 1989

FROM: Thomas Varner

COPIES:

SUBJECT: Use of Reference No. 20

REFERENCE:

This reference is provided in order to document that the N.J. Zinc Co. facility is now occupied by Gulf and Western Natural Resources Group.

TAV 3/8/89

PLEASE PRINT

NEW JERSEY STATE DEPARTMENT OF
ENVIRONMENTAL PROTECTION
FIELD RECORD OF VIOLATION

VIOLATION
DATE 2/11/82 TIME AT SITE 3:00 a.m. (p.m.) from 4:30 a.m. (p.m.) to ID NUMBER

Sec A — PERSON IN VIOLATION

FULL BUSINESS NAME G & W Eastern Natural Resource Groups

MAILING ADDRESS Foot of Water Street (No.) (Street) Gloucester City (Post Office) N.J. (Zip Code) 08030

PHONE NUMBER (609) 456 3500

TYPE OF OWNERSHIP

Individual
Partnership
Corporation
Municipal (type)

NAME OF OWNER, PARTNERS, OFFICERS, OFFICIALS — TITLE

NJ ZINC c/o G & W Industries
P.O Box 10214 Hi Ridge Park
STAMFORD CONN. 06904

PERSONS INTERVIEWED/COMMENTS/PHONE # Mr Faust - (Environmental Engineer)

Sec B — LOCATION OF VIOLATION

LOCATION ADDRESS Foot of Water St. (No.) (Street) Gloucester City (Municipality) Camden (County)

(Show details on reverse side) Book Plate ____ Lot 10-13, 18, 19, 1 Block 110

OWNER NJ ZINC (Name) see above address (No.) (Street) (City)

Sec C — VIOLATION

CODE REFERENCE Chapter(s) 7 Section(s) 26 Paragraph(s) 7.4(a)3.

DETAILS Above Company offered to transport waste oil (a NJDEP hazardous waste) without preparing a manifest

REMARKS

RECOMMENDED ACTION NO P

VIEWED BY

DATE

DATE

DATE

Mike Malone
INSPECTOR (SIGNATURE)

Mike MALONE — Environmental Specialist
PRINT NAME — TITLE

REFERENCE NO. 21

GAF CORPORATION
1361 Alps Road
Wayne NJ 07470
201 628 3000

Gary

GAF

Office of Permits Administration
Water Quality Management Element
Division of Water Resources
CN-029
Trenton, NJ 08625

May 15, 1984

Ref: GAF Corporation, Gloucester City Plant
Renewal of Discharge Permit #NJ0005371

Gentlemen:

Enclosed are completed New Jersey forms CP#1 and WQM-1, and U.S.E.P.A. form 3510-2C, submitted as an application for renewal of the referenced permit.

Although all operations at the plant have been suspended for an indefinite period of time, as you and EPA Region II were notified by letter of March 6, 1984, we wish to keep the permit in force because of the possibilty of resuming production in the future.

Both permitted discharges ceased in January, 1984, and no samples were available for the analyses called for in the application forms. In their place, we have used historical data from the discharge monitoring reports covering the last two years. We consider this valid, since, unless there is a change in the operation or process, there should be no change in the characteristics of the discharges.

Very truly yours,

H. J. Holloway

H. J. Holloway
Engineering Dept.
Building Products

HJH/smw

cc: Permits Administration Branch
Office of Policy and Management
U.S. Environmental Protection Agency
26 Federal Plaza
New York, NY 10278

REFERENCE NO. 22

NEW JERSEY DEPARTMENT
OF
ENVIRONMENTAL PROTECTION

TO

Report of Phone Call

Case Name: GAF.

Incident Notification Number:

Date: 4/29/87

Referred to:

Time: 0915

Bureau or Office: DHWM SPO

File: 04 14 05 (NF)

Person Contacted: by Fred Bright Phone Number: (201) 628-3000

Affiliation/Address: GAF Hdqtrs

Subject of Call: Status of Gloucester Plant

Summary of Call: Currently All information is on hold in GAF Legal Dept which is working on paperwork for ECRA. Any Additional information needed must be requested by letter.

Bright confirmed that All Hazardous materials were taken off-site under manifest by Clean Venture between 9/86 and 11/86. Legal dept is working Toward ECRA negative declaration on portions of the facility (warehouse, etc).

ACTION RECOMMENDED:

Investigator: Scot J. Frew

REFERENCE NO. 23

Form DWM-051
1/86

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT

Page ____ of ____

INVESTIGATION

CASE #: _____ DWM FILE #: 84-14-05 (NF)

TIME ARRIVED: 1440

INVESTIGATOR: S. FROW DATE: 4/27/87 TIME DEPARTED: 1540

LOCATION: GAF PROPERTY OWNER: GAF

ADDRESS: WATER ST. MAILING ADDRESS: 1361 ALPS ROAD

Gloucester City County - CAMDEN WAYNE, NJ

BLOCK: 116A LOT: 14A, 14F, 15-17, 19, 20-34, 61-67 RESPONSIBLE PARTY GAF

LOCATION TELEPHONE #: (201) 628-3000 (WAYNE HDQTRS) ADDRESS: _____

EPA ID #: NJD 043 292 606

LOCAL HEALTH DEPT. REP. NONE ON SITE TELEPHONE #: —

ORIGIN OF COMPLAINT: — TELEPHONE #: —

NATURE OF COMPLAINT: ATTEMPTED RCRA INSPECTION (LTD. RFA)

PHOTOGRAPHS TAKEN: N/A SAMPLE #: N/A

FINDINGS: Upon arrival at site, plant appeared to be shut down. MET John Wright, power plant supr., who remains onsite to supervise contractors who are removing machinery.

Wright stated that the plant shut down in JANUARY 1984 and contractors are now onsite to remove the remaining machinery. The plant had been involved in the manufacture of the base felt for roofing and flooring. This product was manufactured, then shipped elsewhere for saturation and binding to make the final products.

Wright stated that all of the "so-called" hazardous materials were removed between 1985-86 by CLEAN VENTURE. All records are now located at the GAF Headquarters in Wayne, NJ. A tour of the facility revealed no noticable contamination or storage of waste onsite.

The plant may be sold or rented in the future and may be involved with RCM / ECRA. Any information could be rec'd through GAF Headquarters, (201) 628-3000, contacts: Fred Bright or JACK HALLOWAY with Environmental Engineering group.

No additional information was available at the location and I secured at approx 1545 hrs.

Terry Ostrander
Supervisor Signature

Investigator Signature

COPIES: White - DWM File Yellow - Local Health Dept. Pink - Investigator

REFERENCE NO. 24

GAF CORPORATION
1361 Alps Road
Wayne NJ 07470
201 628 3000

State of New Jersey
Department of Environmental Protection
Division of Waste Management
CN028
Trenton, NJ 08625

September 29, 1986

Subject: Uniform Hazardous Waste Manifests

Gentlemen:

Enclosed are Copy 6 (Destination State) and Copy 7 (Generator State) of the following Uniform Hazardous Waste Manifests:

NJA0180000	Page 1 of 1
NJA0234636	Page 1 of 1
NJA0234639	Page 1 of 1
NJA0234640	Page 1 of 1
NJA0234641	Page 1 of 1
NJA0234642	Page 1 of 1

These manifests are for material transported from GAF's Gloucester City, N.J. facility on September 15, 1986.

Very truly yours,

F. Bright

F. Bright
Project Engineer

FB/db

cc: A. Dresner, S. Graziano, B. Lloyd, R. Munn - GAF, Wayne
J. Wright - GAF, Gloucester City

WHW-001 (REV. 9-84)

State of New Jersey
epartment of Environmental Protecti
Division of Waste Management
CN 028, Trenton, NJ 08625

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator's US EPA ID No. / Manifest Document No.	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.*
[redacted]	NJD0[redacted]6061000[redacted]1	1 of 1	

3. Generator's Name and [redacted]
G.A.F. C[redacted] Bldg#2
1361 Al[redacted] New Jersey 07470

A. State Manifest Document Number: NJA0180008 [redacted]

4. Generator's Phone (201) 628-3031 Attn: Fred Bright

5. Transporter 1 Company Name	6. US EPA ID Number
Clean Venture Inc.	NJD098563433[5]

7. Transporter 2 Company Name	8. US EPA ID Number

9. Designated Facility Name and Site Address	10. US EPA ID Number
Perk Chemical Company Inc 217 South First Street Elizabeth New Jersey 07206	NJD002200046

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Waste Flammable Solid N.O.S. Flammable Solid U.N. 1325	011	DM	03300	P
b. Waste Corrosive Liquid Poisonous N.O.S. Corrosive Material U.N. 2922	004	DM	00200	G
c. Hazardous Waste Solid N.O.S. ORM-E N.A. 9189	011	DM	03300	P
d. Waste Oxidizer Poisonous Solid N.O.S. Oxidizer N.A. 9200	002	DM	00600	P

[redacted]

15. Special Handling Instructions and Additional Information
Product Code # 71132AA { a b c d
Also included 61 empty drums and 19 empty 5 gal pails PC#71132 MT
Also Included w/ Shipment 1 Drum (#31 L.P.) Non-Hazardous Waste

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name	Signature	Date Month Day Year
John Wright	[signature] Wright	09 15 86

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month Day Year
Peter DAgata	Peter DAgata	09 15 86

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Date Month Day Year

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection (609) [redacted] 5560 (609) [redacted] 7172

EPA Form 8700-22 (Rev. 4-85) Previous edition obsolete

6 GENERATOR MAIL TO TSD'S STATE

WHW-001 (REV 9-84)

State of New Jersey
Department of Environmental Protection
Division of Waste Management
CN 028, Trenton, NJ 08625

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST [redacted]

1. Generator's US EPA ID No.: WJD0032[illegible]2696 — Manifest Document No.: 00092
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: GAF Corp [redacted]
1361 Al[redacted] New Jersey 07470
4. Generator's Phone: ([redacted] 3031 Arin Ful [illegible]

A. State Manifest Document Number: NJA0234636

B. State Generator's ID: [redacted]

5. Transporter 1 Company Name: Clean Venture Inc.
6. US EPA ID Number: WJD095634335
7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address: Perk Chemical Company Inc. 217 South First Street Elizabeth New Jersey 07206
10. US EPA ID Number: WJD002490096

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	
a. Waste Corrosive Solid N.O.S. Corrosive Material U.N. 1759	003	DM	00900	P	[redacted]
b. Waste Petroleum Oil N.O.S. Combustible Liquid U.N. 1270	009	DM	00459	G	[redacted]
c. Waste Chromic Acid Solution Corrosive Material U.N. 1755	001	DM	00005	G	[redacted]
d. Hazardous Waste Solid N.O.S. ORM-E N.A. 9189	004	DM	00500	P	[redacted]

J. Additional Descriptions for Materials Listed Above [illegible]
b. Grease, Machine Oil and Lubricating Oils Liquid
d. Protective Clothing [illegible] Boots, Tyveks, Gloves Etc.

K. Handling Codes for Wastes Listed Above [redacted]

15. Special Handling Instructions and Additional Information
Product Code # a-71132AA c-71132DC d-71132LC
b-71132LS(2), 71132OE(2), 71132LJ(2), 71132OI, 71132OM, 71132OT

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, and all applicable state laws and regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: [illegible] — Signature: [illegible] — Date: Month Day Year 09 15 [illegible]

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: [illegible] — Signature: [illegible] — Date: Month Day Year [illegible]

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: — Signature: — Date: Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.
Printed/Typed Name: — Signature: — Date: Month Day Year

In case of an emergency or spill immediately call the state's emergency [redacted] and [redacted] Department of Environmental Protection (609) [redacted] 7172

EPA Form 8700-22 (Rev. 4-85) Previous edition obsolete

6 — GENERATOR MAIL TO TSD'S STATE

VHW-001 (REV 9-84)

State of New Jersey
epartment of Environmental Protecti
Division of Waste Management
CN 028, Trenton, NJ 08625

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039 Expires 7-31-86

UNIFORM HAZARDOUS WASTE MAN[redacted]

1. Generator's US EPA ID No. NJD0413292606 — Manifest Document No. 99993
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

A. State Manifest Document Number NJA0234639

[redacted]

3. Generator's Name and Mailing Address
GAF Co[redacted]lding #2
1361 Al[redacted]yne New Jersey 07470

4. Generator's Phone (201) 628-3031 Attn: Fred Bight

5. Transporter 1 Company Name: Clean Venture Inc.
6. US EPA ID Number: NJD098563335

7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address:
Perth Chemical Company Inc.
217 South First Street
Elizabeth New Jersey 07206

10. US EPA ID Number: NJ999420994 6

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	
a. Waste Poisonous Liquid N.O.S. Poison B U.N. 2810	001	DM	00055	G	[redacted]
b. Waste Calcium Oxide ORM-B U.N. 1910	001	DM	00400	P	[redacted]
c. Waste Sodium Nitrate Oxidizer U.N. 1498	001	DM	00300	P	[redacted]
d. Waste Corrosive Solid N.O.S. Corrosive Material U.N. 1759	001	DM	00300	P	D002

J. Additional Descriptions for Materials Listed Above [redacted] Sodium Hexa[redacted] 100% [redacted] Solid

K. Handling Codes for Wastes Listed Above [redacted]

15. Special Handling Instructions and Additional Information
Product Codes # a – 71132IC   c – 71132LE
b – 71132LD   d – 71132LF
Also one [illegible] Non-Hazardous Waste PC 71132LA, 71132LB, 71132LK, 71132DK, 71132LL

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, and all applicable state laws and regulations.
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Printed/Typed Name	Signature	Date Month Day Year
John W. Knight	[signature]	09 15 86

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month Day Year
Peter [illegible]	Peter [illegible]	09 15 86

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19

Printed/Typed Name	Signature	Date Month Day Year

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 4-85) Previous edition obsolete

6 – GENERATOR MAIL TO TSD'S STATE

HW-001 (REV 9-84)

State of New Jersey
Department of Environmental Protection
Division of Waste Management
CN 028, Trenton, NJ 08625

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-[illegible] Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator's US EPA ID No. WJD004329...[illegible] Manifest Document No. 00001	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
G.A.F. [redacted] Building #2
1361 Al[redacted] New Jersey 07470
4. Generator's Phone 201-628-3031 Attn: Fred Bright

A. State Manifest Document Number NJA0234640

5. Transporter 1 Company Name: CleanVenture Inc.
6. US EPA ID Number: NJD00563[illegible]335

7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
Perth Chemical Company Inc.
217 South First Street
Elizabeth New Jersey 07206
10. US EPA ID Number: NJD0002209996

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	
a. Hazardous Waste Solid N.O.S. ORM-E N.A. 9189	005	DM	02500	P	0001
b. Hazardous Waste Liquid N.O.S. ORM-E N.A. 9189	002	DM	00110	G	
c. Hazardous Waste Liquid N.O.S. ORM-E N.A. 9189	002	DM	00110	G	
d. Waste Corrosive Liquid N.O.S. Corrosive Material UN 1760	002	DM	00110	G	0002

J. Additional Descriptions for Materials Listed Above
a. [illegible]
b. Water [illegible] T-Liquid
c. Polyalk[illegible] 10%; Water [illegible]
d. Diethylamine [illegible]; Water [illegible] - Liquid

15. Special Handling Instructions and Additional Information
Product Code # a - 7113ZLG d - 7113ZCO
b - 7113ZHS
c - 7113ZAP

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, and all applicable state laws and regulations.
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Printed/Typed Name	Signature	Date Month Day Year
[illegible]	[signature]	09/[illegible]

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month Day Year
Peter [illegible]	[signature]	09/[illegible]

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Date Month Day Year

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection (609) [redacted] (609) [redacted] 7172

EPA Form 8700-22 (Rev. 4-85) Previous edition obsolete

6 – GENERATOR MAIL TO TSD'S STATE

VHW-001 (REV 9-84)

State of New Jersey
Department of Environmental Protection
Division of Waste Management
CN 028, Trenton, NJ 08625

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2000-0404. Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: NJD043292696 — Manifest Document No.: 00005
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: G.A.F. C[redacted]uilding #2, 1361 Al... e New Jersey 07470
4. Generator's Phone: 201 628-3031 Attn: Fred Bright

A. State Manifest Document Number: NJA0234641

5. Transporter 1 Company Name: Clean Venture Inc.
6. US EPA ID Number: NJD085634355

7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address: Perk Chemical Company Inc., 217 South First Street, Elizabeth New Jersey 07206
10. US EPA ID Number: NJD002200046

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. Waste Sodium Aluminate Solution, Corrosive Material, U.N. 1819	002	D1	00060	G	D002
b. Waste Corrosive Liquid N.O.S., Corrosive Material, U.N. 1760	001	D4	00055	G	[redacted]
c. Waste Flammable Liquid N.O.S., Flammable Liquid, U.N. 1993	001	D4	00055	G	[redacted]
d. Hazardous Waste Liquid N.O.S., ORM-E, N.A. 9189	001	D4	00055	G	X900

J. Additional Descriptions for Materials Listed Above: [illegible]

15. Special Handling Instructions and Additional Information:
Product Code # a – 7113ZHA
b – 7113ZLH, 7113ZCS, 7113ZCH
c – 7113ZID
d – 7113ZDM

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, and all applicable state laws and regulations.
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Printed/Typed Name: [illegible] — Signature: [illegible] — Date: Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: PETER D... — Signature: Peter ... — Date: Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: — Signature: — Date: Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19
Printed/Typed Name: — Signature: — Date: Month Day Year

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection (609) 292-5560 (800) 424-8802

EPA Form 8700-22 (Rev. 4-85) Previous edition obsolete

6 – GENERATOR MAIL TO TSD'S STATE

NJW-001 (REV 9-84)

State of New Jersey
epartment of Environmental Protecti
Division of Waste Management
CN 028, Trenton, NJ 08625

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2000-0404. Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: NJD 043292606 — Manifest Document No.: 00016
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

A. State Manifest Document Number: NJA0234642

3. Generator's Name and Mailing Address: GAF Corp. [illegible] Building #2, 1361 Alps Road, Wayne New Jersey 07470
4. Generator's Phone: (201) 628-3031 Attn: Fred Bright
5. Transporter 1 Company Name: Clean Venture Inc.
6. US EPA ID Number: NJD 98063 4335
7. Transporter 2 Company Name:
8. US EPA ID Number:
9. Designated Facility Name and Site Address: Park Chemical Company Inc., 217 South First Street, Elizabeth New Jersey 07206
10. US EPA ID Number: NJD 002200046

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. Waste Aluminum, Metallic Powder, Flammable Solid U.N. 1396	002	DM	00600	P	D001
b. Waste Flammable Liquid N.O.S., Flammable Liquid U.N. 1993	001	DM	00055	G	[redacted]
c. Waste Corrosive Solid N.O.S., Corrosive Material U.N. 1759	002	DM	00600	P	[redacted]
d. Waste Petroleum Oil N.O.S., Combustible Liquid N.A. 1270	001	DM	00030	G	D026

J. Additional Descriptions for Materials Listed Above

a. [illegible]
b. Chlorinated 5%, I-liquid
c. Sodium Hydroxide 20%, Inorganic Salts 70%, Organic 10%, C-Solid
d. Mineral Spirits 92%, Wetting Agents 8%, Liquid

15. Special Handling Instructions and Additional Information
Pickup Code # 7-7113ZLM
L-7113ZFE
C-7113ZLN

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, and all applicable state laws and regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: [illegible] WRIGHT — Signature: [illegible] — Date: Month 08 Day 15 Year 8[illegible]

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: [illegible] — Signature: [illegible] — Date: Month 08 Day 15 Year 8[illegible]

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: — Signature: — Date: Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: — Signature: — Date: Month Day Year

In case of an emergency or spill immediately call the state [illegible] and [illegible] (60[redacted]-656[redacted]-7172)

EPA Form 8700-22 (Rev. 4-85) Previous edition obsolete

6 – GENERATOR MAIL TO TSD'S STATE

REFERENCE NO. 25

GAF CORPORATION
1361 Alps Road
Wayne NJ 07470
201 628 3000

November 11, 1986

State of New Jersey
Department of
Environmental Protection
Division of Waste Management
CN028
Trenton, NJ 08625

Subject: Uniform Hazardous Waste Manifests

Gentlemen:

Enclosed are Copy #7 (General to State) of the following Uniform Hazardous Waste Manifests:

NJA0240406 Page 1 of 1
NYA2701539 Page 1 of 1

These manifests are for material transported from GAF's Gloucester City, N.J. facility on November 7, 1986

Very truly yours,

Fred Bright
Project Engineer

FB/db

cc: A. Dresner, S. Graziano, B. Lloyd,
R. Munn - GAF, Wayne
J. Wright - GAF, Gloucester City

100 ANNIVERSARY

GAF CORPORATION
1361 Alps Road
Wayne NJ 07470
201 628 3000

November 11, 1986

State of Ohio
Environmental Protection Agency
Hazardous Waste Division
P.O. Box 1049
Columbus, OH 43216

Subject: Uniform Hazardous Waste Manifest

Gentlemen:

Enclosed is Copy #6 (Destination State) of the following Uniform Hazardous Waste Manifest:

NJA0240406 Page 1 of 1

This manifest is for material transported from GAF's Gloucester City, N.J. facility on November 7, 1986

Very truly yours,

Fred Bright
Project Engineer

FB/db

cc: A. Dresner, S. Graziano, B. Lloyd,
R. Munn - GAF, Wayne
J. Wright - GAF, Gloucester City

GAF CORPORATION
1361 Alps Road
Wayne NJ 07470
201 628 3000

November 11, 1986

State of New York
Department of
Environmental Conservation
Division of Soild and
Hazardous Waste
P.O. Box 12820
Albany, NY 12212

Subject: Uniform Hazardous Waste Manifest

Gentlemen:

Enclosed is Copy #6 (Destination State) of the following Uniform Hazardous Waste Manifest:

NYA2701539 Page 1 of 1

This manifest is for material transported from GAF's Gloucester City, N.J. facility on November 7, 1986

Very truly yours,

Fred Bright
Project Engineer

FB/db

cc: A. Dresner, S. Graziano, B. Lloyd,
R. Munn - GAF, Wayne
J. Wright - GAF, Gloucester City

100 ANNIVERSARY

48-14-1 (10/84)

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID AND HAZARDOUS WASTE

HAZARDOUS WASTE MANIFEST

P.O. Box 12820, Albany, New York 12212

Please print or type.

Form Approved. OMB No. 2000-0404. Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA No.: [illegible]
Manifest Document No.: [illegible]
2. Page 1 of 1

Information in the shaded areas is not required by Federal Law.

3. Generator's Name and Mailing Address: GAF Corporation, Charles & Water Street, Gloucester City, NJ 08030

4. Generator's Phone ( ) 201 628-3031

5. Transporter 1 (Company Name): Resource Technology Services, INC
6. US EPA ID Number: [illegible]

7. Transporter 2 (Company Name):
8. US EPA ID Number:

9. Designated Facility Name and Site Address: Northeastern Environmental Services, Canal Road, Canastota, NY 13032-0238
10. US EPA ID Number: [illegible]

[illegible]

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Waste Picric Acid, wet n:t less than 10% water Flammable Solid NA 1344 *	1	DM	8	P
b. Waste Sodium Hydrosulfite Flammable Solid UN 1384 *	1	DM	1	P
c. Waste Sodium Peroxide Oxidizer UN 1504 *	1	DM	2	P
d.				

J. Additional Descriptions for Materials listed Above
a. I-Lab Pack
b. I-Lab Pack
c. ?I-Lab Pack
d.

K. Handling Codes for Wastes Listed Above
a. [checked] c. [checked]
b. [checked] d.

15. Special Handling Instructions and Additional Information

a) 5043-86-01-X02 * See attached inventories
b) X03
c) X04 NJ Transporter NJ DEP 57815

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations and state laws and regulations.

Printed/Typed Name: John WRIGHT
Signature: John Wright
DATE Mo. Day Year

17. Transporter 1 (Acknowledgement of Receipt of Materials)
Printed/Typed Name:
Signature:
DATE Mo. Day Year

18. Transporter 2 (Acknowledgement of Receipt of Materials)
Printed/Typed Name:
Signature:
DATE Mo. Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name:
Signature:
DATE Mo. Day Year

IN CASE OF emergency or spill immediately call the National Response Center (800) 424-8802 and the N.Y. Department of Transportation (518) 457-7362

EPA Form 8700-22 (3-84)

COPY 6—Disposer State—mailed by generator

HW-001 (REV. 9-84)

State of New Jersey
Department of Environmental Protection
Division of Waste Management
CN 028, Trenton, NJ 08625

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039, Expires 9-30-88

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. N J D 0 4 3 2 9 2 6 0 6 — Manifest Document No. 4 0 4 0 6

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

A. State Manifest Document Number NJA0240406

3. Generator's Name and Mailing Address
[redacted] Corporation
[redacted] Water Street
[redacted] Gloucester City, NJ 08030

4. Generator's Phone (201) 628-3031

5. Transporter 1 Company Name: Resource Technology Services, Inc
6. US EPA ID Number: P A D 9 8 0 5 5 0 4 7 9

7. Transporter 2 Company Name: Chem Freight, Inc.
8. US EPA ID Number: O H D 0 7 5 0 0 6 3 0 4

9. Designated Facility Name and Site Address
Environmental Enterprises Inc
4650 Spring Grove Avenue
Cincinnati, OH 45215
10. US EPA ID Number: O H D 0 8 3 3 7 7 0 1 0

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No	Type	13. Total Quantity	14. Unit Wt/Vol
a. Waste Sodium Azide, Poison B, UN1687	1	DM	18	P
b.				
c.				
d.				

J. Additional Descriptions for Materials Listed Above
a. W001-56
b.

K. Handling Codes for Wastes Listed Above
a.
b.

15. Special Handling Instructions and Additional Information
[illegible]

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and all applicable state laws and regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment

Printed/Typed Name: John WRIGHT — Signature: [signature] — Date: Month 11 Day 12 Year 86

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: [illegible] — Signature: [signature] — Date: Month 11 Day 12 Year 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: — Signature: — Date: Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19
Printed/Typed Name: — Signature: — Date: Month Day Year

GENERATOR

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection (609-[illegible]) or (609-292-7172)

6 - GENERATOR MAIL TO TSD'S STATE

DRUM #: S042-86-01-X04 GENERATOR: Clean Harbors / GAF Corp.

DATE: 11-7-86 MANIFEST #: NYB 2701539

DRUM SIZE: 5gal Can

DRUM WEIGHT: ______ DRUM LABEL: Waste Sodium Peroxid

SPECIAL HAZARDS MANAGEMENT CO.
P.O. Box 711, Oaks, PA 19456

APPROVAL NO: ______

QTY.	SIZE	PHY. ST.	TYPE CONT.	CONTENTS	DOT #	EPA #
2	1lb	S	m	Sodium Peroxide	UN1504	

SPECIAL HAZARDS MANAGEMENT CO.
P.O. Box 711, Oaks, PA 19456

APPROVAL NO:

DRUM #: S042-[illegible]-X08 GENERATOR: Chem [illegible] / GAF Corp

DATE: 11-7-86 MANIFEST #: NYA [illegible]

DRUM SIZE: 5 gal

DRUM WEIGHT: DRUM LABEL: Waste Sodium Hydrosulfite

QTY.	SIZE	PHY. ST.	TYPE CONT.	CONTENTS	DOT #	EPA #
1	1 lb	S	G	Sodium Dithionite (Hydrosulfite)	UN1384	

SPECIAL HAZARDS MANAGEMENT CO.
P.O. Box 711, Oaks, PA 19456

APPROVAL NO:

DRUM #: 5043-86-01 X02 GENERATOR: [illegible]/GAF Corp.

DATE: 11-7-86 MANIFEST #: NYB [illegible] 539

DRUM SIZE: 5 gal

DRUM WEIGHT: DRUM LABEL: Waste Picric Acid, wetted with not less than 10% water

QTY.	SIZE	PHY. ST.	TYPE CONT.	CONTENTS	DOT #	EPA #
1	1lb	S	G/P	Picric Acid in 90% water (1 gal)	NA1344	

DRUM #: 5042-86-01-X01 GENERATOR: Clean Venture/GAF Corp

DATE: 11-2-86 MANIFEST #: NJA0240026

DRUM SIZE: 5-1

DRUM WEIGHT: _____ DRUM LABEL: Waste Sodium Azide

SPECIAL HAZARDS MANAGEMENT CO.
P.O. Box 711, Oaks, PA 19456

APPROVAL NO: _____

QTY.	SIZE	PHY. ST.	TYPE CONT.	CONTENTS	DOT #	EPA #
1	100gr	S	G/F	Sodium Azide	UN1687	P105

PPM INC

1875 FORGE STREET
TUCKER, GEORGIA 30084
(404) 934-0902
TELEX NO. 543-129

January 26, 1987

Max Sandler
Greylag Technical Services
PO Box 239
Ewan, NJ 08025

RE: PPM Job Control Number: 1291-0603

Dear Mr. Sandler:

This is to certify that the following material received from your company on manifest number NJA0205958 was properly disposed of on November 15, 1986 according to all appropriate Federal, State and Local regulations.

Generator	Description of Material
GAF Corporation	11 Drums Debris

If you have any questions concerning the disposal of your material, please feel free to contact me in our Tucker, Georgia office at (404)934-0902.

Sincerely,

PPM, INC.

Lorraine Gardner

Lorraine Gardner
Recordkeeper

10 CENTRAL AVENUE
KANSAS CITY, KANSAS 66118
(913) 621-4206
TELEX NO. 434-607

4105 WHITAKER AVENUE
PHILADELPHIA, PENNSYLVANIA 19124
(215) 425-5144
TELEX NO. 71-4972670

TORONTO STAR BUILDING
SUITE 601A
ONE YONGE
TORONTO, ONTARIO M5E-1E5
(416) 364-1919
TELEX NO. 065-242-00

VHW-001 (REV. 9-84)

State of New Jersey
Department of Environmental Protection
Division of Waste Management
CN 028, Trenton, NJ 08625

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2000-0404. Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.	Manifest Document No.
2. Page 1 of	Information in the shaded areas is not required by Federal law.
3. Generator's Name and Mailing Address	A. State Manifest Document Number NJA0205958
	B. State Gen. ID
4. Generator's Phone ( )	
5. Transporter 1 Company Name	6. US EPA ID Number
	C. State Transporter 1 ID
	D. Transporter's Phone
7. Transporter 2 Company Name	8. US EPA ID Number
	E. State Transporter 2 ID
	F. Transporter's Phone
9. Designated Facility Name and Site Address	10. US EPA ID Number
	G. State Facility's ID
	H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.			016000		
b.					
c.					
d.					

GENERATOR

J. Additional Descriptions for Materials Listed Above		K. Handling Codes for Wastes Listed Above	
a. SOLID	c.	a.	c.
b.	d.	b.	d.

15. Special Handling Instructions and Additional Information

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, and all applicable state laws and regulations.

Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name	Signature	Date Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Date Month Day Year

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

NJA0205958

EPA Form 8700-22 (Rev. 4-85) Previous edition obsolete

8 — GENERATOR COPY

REFERENCE NO. 26

DRAFT

GRAPHICAL EXPOSURE MODELING SYSTEM

(GEMS)

USER'S GUIDE

Prepared for:

U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF PESTICIDES AND TOXIC SUBSTANCES
EXPOSURE EVALUATION DIVISION
Task No. 4
Contract No. 68016618
William Wood - Project Officer
Loren Hall - Task Manager

Prepared by:

GENERAL SOFTWARE CORPORATION
8401 Corporate Drive
Landover, Maryland 20785

Submitted: June 25, 1984

MASTER AREA REFERENCE FILE (MARF) OF THE 1980 CENSUS

Source

The Master Area Reference File (MARF) is a proprietary product of Donnelly Marketing, Inc., a subsidiary of Dunn and Bradstreet, and is available only to EPA users and to contractors engaged in EPA projects.

Description

The complete corrected MARF of the 1980 Census, with geographic coordinates for small geographic areas, is installed for GEMS on a separate disk pack. It consists of four subfiles, one for each major census geographic region, and is available to users when that disk pack is mounted. The file has a variety of location identification information, including region, state, county, place, census tracts and enumeration districts or block groups (See Figure C-1 for illustrations). It also contains population count by race, the number of occupied and owner-occupied housing units, group quarters, and number of families for all the enumeration districts/block groups for the continental United States, Hawaii, and Alaska.

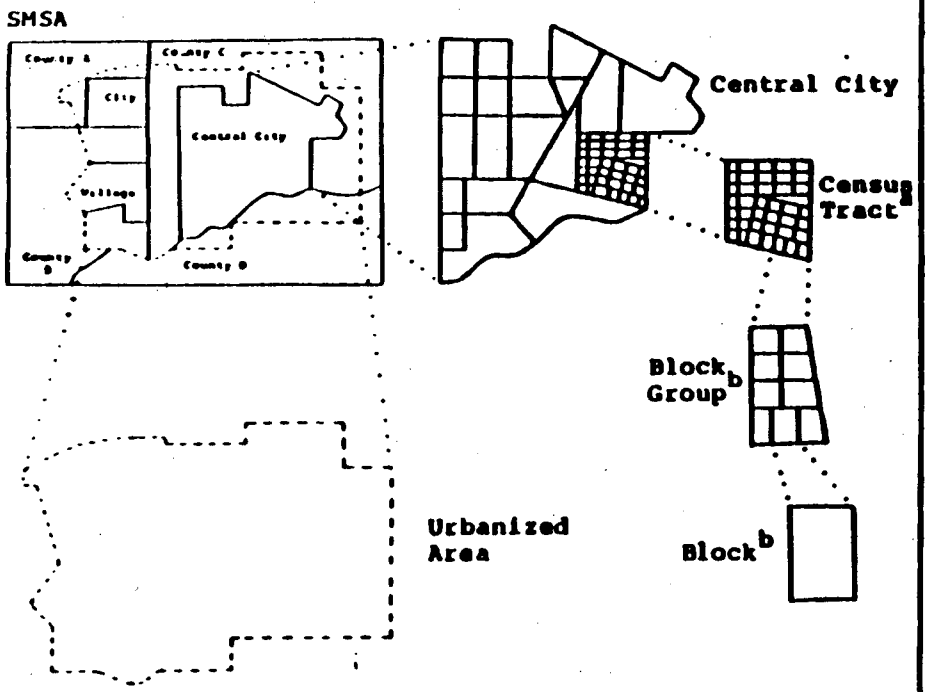
CEDPOP, a subset of the MARF of the 1980 Census, is accessible through GEMS. In addition to total population and household counts, the file includes geographic coordinates for the population-weighted centroid of each census block group or enumeration district (BG/ED) in the file.

Use

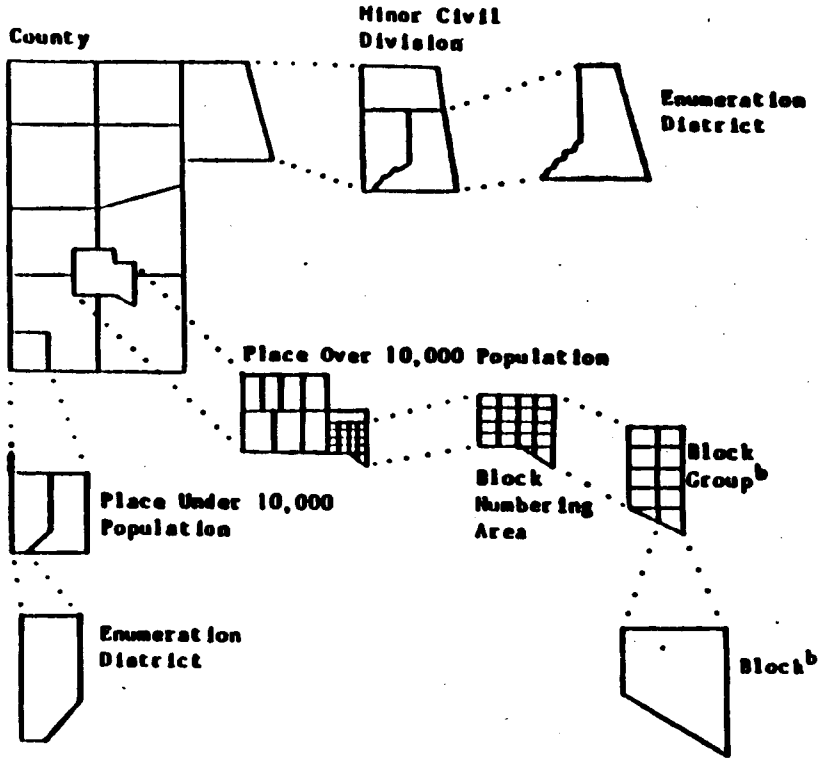
The complete MARF 80 Census file, installed in GEMS on a separate disk, is expected to be used heavily by GEMS users to identify household and population by racial groups at any required geographic level. County aggregate populations have already been created from this file.

CEDPOP was interfaced with ATM80 in GEMS to provide estimates of population sizes exposed to concentrations of airborne chemicals around a release site and with BOXMOD80 to provide population estimates within area source regions. The population centroids are identified, and populations are accumulated in sectors (typically the sixteen wind direction sectors) surrounding the center point within a user-specified number of radial distances out from the center.

The CEDPOP file also is accessed by CENSUS DATA and RADII-5 procedures under the GEODATA HANDLING operation in GEMS. CENSUS DATA accumulates population and housing counts by up to ten user-specified radial distances and from one-to-sixteen sectors. The RADII-5 program tabulates the same information (except housing counts) and displays the centroid locations for user-specified circular distances around a center point.



Inside Urbanized Area



Outside Urbanized Area

[a]The entire SMSA is subdivided into census tracts.

[b]Blocks and block groups do not have symbolized boundaries as do the other areas, but are identified by number.

Figure C-1. Geographic Hierarchy Inside and Outside Urbanized Areas (UA's)

(FMS) I

GOF CORP.
LATITUDE 39:53:26 LONGITUDE 75: 7:44 1980 POPULATION

mi KM	0.00 - 0.25 0.00-.400	0.25 - 0.50 .400-.810	0.50 - 1.0 .810-1.60	1.0 - 2.0 1.60-3.20	2.0 - 3.0 3.20-4.80	3.0 - 4.00 4.80-6.40	SECTOR TOTALS	0-1.0	0.0-2.0	0.0-3.0	0.0-4.0
S I	0	3506	8264	28147	111304	160093	311314				
RING TOTALS	0	3506	8264	28147	111304	160093	311314	11,770	39,917	151,221	311,314

(FMS) I

GOF CORP.
LATITUDE 39:53:26 LONGITUDE 75: 7:44 1980 HOUSING

mi KM	0.0 - 0.25 0.00-.400	0.25 - 0.50 .400-.810	0.50 - 1.0 .810-1.60	1.0 - 2.0 1.60-3.20	2.0 - 3.0 3.20-4.80	3.0 - 4.0 4.80-6.40	SECTOR TOTALS	0-1.0	0.0-2.0	2.0-3.0	0.0-4.0
S I	0	1145	2933	10222	39319	60010	113629				
RING TOTALS	0	1145	2933	10222	39319	60010	113629	4,078	14,300	53,619	113,629

REFERENCE NO. 27

PRELIMINARY ASSESSMENT
OFF SITE RECONNAISSANCE
INFORMATION REPORTING FORM

Date: February 7, 1989

Site Name: GAF Corp. TDD: 02-8902-02

Site Address: Water and Charles Streets
Street, Box, etc.

Gloucester City
Town

Camden
County

New Jersey
State

NUS Personnel:

Name	Discipline
Brian Dietz	Biologist
Ed Knufd	Geologist

Weather Conditions (clear, cloudy, rain, snow, etc.):

CLEAR, NO WIND, SUNNY

Estimated wind direction and wind speed: NO WIND

Estimated temperature: 40° F

Signature: B.D. Brian E. Dietz Edmund C. Knufd Jr. Date: 2-7-89

Countersigned: Brian Dietz Date: 2/7/89

PRELIMINARY ASSESSMENT

INFORMATION REPORTING FORM

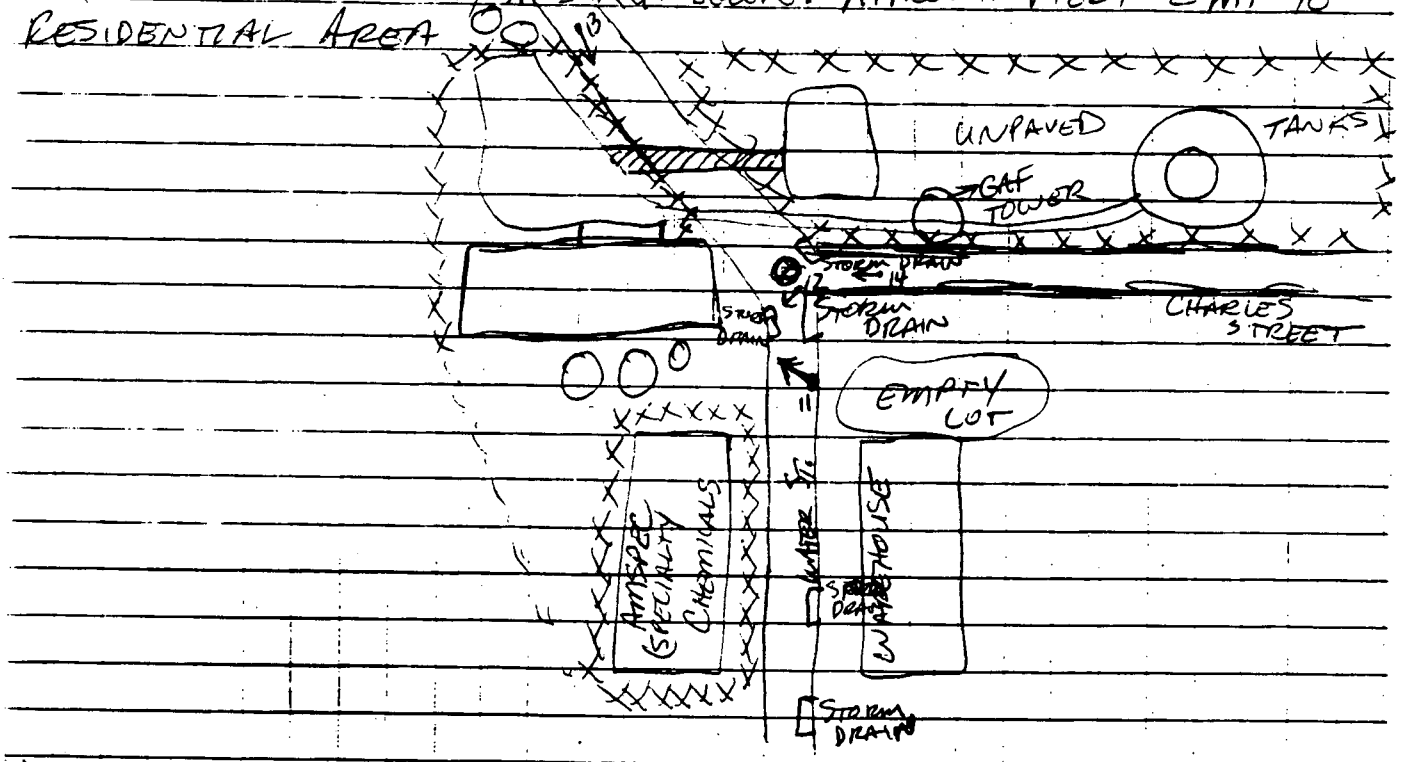
Date: 2/7/89

Site Name: GAF Corp. TDD: 02-8902-02

Site Sketch:

Indicate relative landmark locations (streets, buildings, streams, etc.).
Provide locations from which photos are taken.

ARRIVED AT GAF AT 1400 HOURS. SITE APPEARS "INACTIVE". EQUIPMENT LOOKS RUSTY AND RUNDOWN. APPROXIMATELY .2 mi TO RESIDENTIAL AREA



DOORS ARE FENCED OVER WITH CHAIN LINK FENCING. SEWER MANHOLE AT INTERSECTION OF WATER AND CHARLES STREET. SAW NO WASTE CONTAINERS ON SITE. LIMITED ACCESS TO SITE. MISCELLANEOUS "APPLIANCE TRASH" ON SITE.

Signature: Edmund Kupfer Jr. Date: 2-7-89

Countersigned: Brian Dietz Date: 2/7/89

PRELIMINARY ASSESSMENT

INFORMATION REPORTING FORM

Date: 2/7/89

Site Name: GAF Comp. TDD: 02-8902-02

Notes (Periodically indicate time of entries in military time):

No Apperent Biota Contamination. Facility Slope Appears ≤ 1%. Miscellaneous Debris in Back of South End of the Site. Left Site at 1430.

Signature: Edmund Kupel Jr. Date: 2-7-89

Countersignature: Brian Dietz Date: 2/7/89

PRELIMINARY ASSESSMENT

INFORMATION REPORTING FORM

Date: 2/7/89

Site Name: GAF Corp. TDD: 02-8902-02

Notes (Cont'd):

Attach additional sheets if necessary. Provide site name, TDD number, signature, and countersignature on each.

Signature: Edmund Kossoff Date: 2-7-89

Countersignature: Brian Dietz Date: 2/7/89

PRELIMINARY ASSESSMENT

INFORMATION REPORTING FORM

Date: 2/7/89

Site Name: GAF Corp. TDD: 02-8902-02

Photolog:

1st Roll of film.

Frame/Photo Number	Date	Time	Photographer	Description
11P/11S	2-7-89	1402	BRIAN DIETZ	LOOKING NW AT SOUTH WALL OF GAF.
12P/12S	2-7-89	1404	BRIAN DIETZ	LOOKING WEST AT SE CORNER OF GAF
13P/13S	2-7-89	1415	ED KNYFD	LOOKING SOUTH DOWN WATER STREET AT GAF.
14P/14S	2-7-89	1418	ED KNYFD	LOOKING WEST FROM CHARLES STREET TO EAST SIDE OF GAF.

Attach additional sheets if necessary. Provide site name, TDD number, signature, and countersignature on each.

Signature: Edmund Kryfd Jr. Date: 2-7-89

Countersignature: Brian Dietz Date: 2/7/89

REFERENCE NO. 28

VUS CORPORATION

TELECON NOTE

CONTROL NO: 02-8902-02

DATE: Feb. 22, 1989

TIME: 10:02

DISTRIBUTION:

GAF Corp. file - CoR

BETWEEN: Ms. Carol Graubart

OF: NJDEP/Bureau of Case Management

PHONE: (609) 633-0701

AND: Thomas Varner

DISCUSSION: VUSI

Ms. Graubart returned my earlier call. I asked her the dates of the 2 spills at GAF. She told me that the PCB spill (about TV 2/24/89) occurred on April 14, 1978 and the final oil spill occurred on May 27, 1979. I told her I had a copy of a waste manifest for PCB-contaminated soils and a transformer carcass, dated 9/12/85, and asked her if that corresponded to the date on which the contaminated soils associated with the spill were cleaned up. She said she had a report which says that 18 drums of material were (to be TV 2/22/89) removed the same day, but that there was no follow up report. She told me to contact Scott From (TV 2/24/89) of Hazardous Waste Engineering (formerly with the Southern Field office) at (609) 633-1418.

TV

ACTION ITEMS:

VUS 267 REV SEP 2581

REFERENCE NO. 29

NUS CORPORATION

TELECON NOTE

CONTROL NO:	DATE:	TIME:
02-8902-02	Feb. 22, 1989	10:29

DISTRIBUTION:

GAF Corp. file - COR

BETWEEN:	OF:	PHONE:
Mr. Bob Clark	Camden County MUA	(609) 541-5200

AND:

Thomas Varner (NUS)

DISCUSSION:

I called Mr. Clark to obtain information about their sewer system. He told me it is a combined system with connections to the Delaware River. The connections consist of tide gates which control system flow during heavy rain periods, letting water from the system discharge into the river. However, the tide gates almost never work, he said, and sometimes remain open. It is even possible, he said, for river water to infiltrate the system during these times. The gates must then be closed manually.

TAV 2/22/89

ACTION ITEMS:

NUS 067 REVISED 2581

REFERENCE NO. 30

NUS CORPORATION

TELECON NOTE

CONTROL NO: 02-8902-02

DATE: FEB. 27, 1989

TIME: 1309

DISTRIBUTION:

GAF Corp. file - COR

BETWEEN: Ms. Clare Whittaker

OF: NJDEP/Bureau of Planning and Assessment

PHONE: (609) 633-2217

AND: Thomas Varner

NUS

DISCUSSION:

Ms. Whittaker told me that the following events occurred at the GAF Corp. site:

1978 - PCB spill - 18 drums of waste removed to Chemtrol during same year (precise date unknown).

1979 - No. 6 fuel oil spill (300 gallons) TV 2/27/89 - oil recovered, transported to Kinsley landfill during same year (exact date unknown)

1983 - Process water spill (2000 gallons) - from process water tank. Absorbed with corrugated paper and woodchips and returned to tank.

TAV 2/27/89

ACTION ITEMS:

NUS 087 REV SEO 0581

REFERENCE NO. 31

Ed Patt

assigned to Ed

TSD

RECEIVED

DEC 31 1986

DEPT. ENVIRON. PROTECTION
DIVISION OF Water Resources
Bureau of Permits Admin.

Affidavit of Exemption
from the
New Jersey Pollutant
Discharge Elimination System Permit
NJPDES # NJ0005371
Gloucester City Plant

State of New Jersey)ss:
County of Camden)

_____, being sworn, states:

RECEIVED
NOV 24 1986
STATE OF NEW JERSEY
DEPT. ENVIRONMENTAL PROTECTION
DIVISION WATER RESOURCES
BUR. OF IND. WASTE MGMT.

1. I am * Project Engineer
(Title and Position)
of GAF Building Materials Corporation
(Name of Company)

2. I have personal knowledge of the facts set forth herein.

3. NJPDES Permit No. 0005371, issued on 3/19/85, authorized the following "discharge" of "pollutants" to the waters of the State of New Jersey from Gloucester City Plt. or operation of
(plant or facility)
such facility. (Check appropriate type of discharge(s)).

___ Suriace water/Municipal
_X_ Surface water/Industrial
_X_ Surface water/Thermal
___ Land application of sludge & septage
___ Land application/Industrial Waste residue
___ Landfill - Industrial/ Commercial
___ Landfill - Municipal
___ Spray Irrigation - Industrial/Commercial
___ Spray Irrigation/Domestic
___ Overland Flow - Industrial/Commercial
___ Rapid Infiltration - Industrial/Commercial
___ Rapid Infiltration
___ Surface Impoundment - Industrial/Commercial
___ Surface Impoundment/Domestic
___ Underground Injection - Industrial/Commercial
___ Underground Injection/Domestic
___ Significant Industrial User
___ Individual Subsurface Sewage Disposal - Industrial/Commercial
___ Individual Subsurface Sewage Disposal - Community
___ Overland Flow/Domestic
___ Rapid Infiltration
___ Surface Impoundment/Domestic
___ Underground Injection/Domestic

Other - Describe _____

_____

These terms are as defined in Section 3 of the New Jersey "Water Pollution Control Act" N.J.S.A. 58:10A-1 et seq. and the New Jersey Pollutant Discharge Elimination System Regulations, N.J.A.C 7:14A-1 et seq.

* Signatory must be the person responsible under N.J.A.C. 7:14A-2.4(b).

4. Plant is no longer discharging pollutants to the waters of the State as described in No. 3 above.

5. Plant is no longer discharging wastes because of the following:

X Facility has been closed
___ Connection to sewerage authority
___ In-plant recycling
___ Other - describe _____

6. I understand that NJPDES permit fees are payable until the date the Department receives this affidavit.

7. I understand that it is a violation of the "Water Pollution Control Act" N.J.S.A. 58:10A-1 et seq. to discharge pollutants except in conformity with a NJPDES permit and that I may be subject to significant civil/criminal penalties for said violation.

Fred Bright
(Signature)

Fred Bright
(Type Name)

Sworn to and signed in my presence this 6 day of October, 19 86.

Pamela A. Moesinger
(Signature)

PAMELA A. MOESINGER
NOTARY PUBLIC OF NEW JERSEY
MY COMMISSION EXPIRES NOV. 4, 1988

(Seal)

Notary Public in and for the County of Passaic, State of New Jersey.

BE ON NOTICE THAT any person who knowingly makes a false statement, representation, or certification in any application, record, or other document filed or required to be maintained under the Water Pollution Control Act... shall, upon conviction, be subject to a fine of not more than $10,000.00 or by imprisonment for not more than 6 months, or both.

A copy of this affadavit shall be kept on the premises and be available for inspection by the Department.

WQM7-H/L:lml

REFERENCE NO. 32

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
CN 029
TRENTON, NEW JERSEY 08625

JOHN W. GASTON JR., P.E.
DIRECTOR

DIRK C. HOFMAN, P.E.
DEPUTY DIRECTOR

Mr. H.J. Holloway
GAF Corporation
1361 Alps Road
Wayne, New Jersey 07470

MAR 19 1985

RE: NJPDES Permit No. NJ0005371
Effective Date: May 1, 1985

Dear mr. Holloway:

Enclosed is the Final NJPDES/DSW Permit and Notice of Authorization to discharge pollutants to the Delaware River, issued in accordance with the New Jersey Pollutant Discharge Elimination System Regulations, N.J.A.C. 7:14A-1 et seq. Violation of any condition of this permit may subject you to significant penalties.

Please note that the limitations for Zn and Copper have been revised to comply with the Delaware River Basin Commission's requirements.

Within 30 calendar days following your receipt of this permit, under N.J.A.C. 7:14A-8.6, you may submit a request to the Administrator for an adjudicatory hearing to reconsider or contest the conditions of this permit. Regulations regarding the format and requirements for requesting an adjudicatory hearing may be found in N.J.A.C. 7:14A-8.9 through 8.13. The request should be made to:

Administrator
Water Quality Management Element
Division of Water Resources
CN-029
Trenton, New Jersey 08625

Applications for renewal of this permit must be submitted at least 180 days prior to expiration of this permit pursuant to N.J.A.C. 7:14A-2.1(f)5.

If you have any questions on this action, please contact Mr. Edward Post, P.E., Chief, Industrial Permits Section at (609) 292-0407.

Sincerely,

Paul C. Kurisko, P.E., Chief
Bureau of Industrial Waste Management
Water Quality Management

WQM49:tmc

Enclosure

Let's protect our earth

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
CN 402
Trenton, N.J. 08625

PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to the further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit.

Permit No.	Issuance Date	Effective Date	Expiration Date
NJ0005371	March 19, 1985	May 1, 1985	April 30, 1990

Name and Address of Applicant	Location of Activity/Facility	Name and Address of Owner
GAF Corporation 1361 Alps Road Wayne, NJ 07470	GAF Corporation Charles and Water Streets Gloucester City, NJ 08030	Same as Applicant

Issuing Division	Type of Permit	Statute(s)	Application No.
Water Resources	NJPDES-DSW	N.J.S.A. 58:10A-1 et seq.	NJ0005371

This permit grants permission to:

Discharge to the Delaware River, classified as Zone 3 waters, in accordance with the conditions set forth in Parts I, II, III, and IV hereof.

Approved by the Department of Environmental Protection
By the Authority of:
John W. Gaston Jr., P.E.
Director
Division of Water Resources

Arnold Schiffman, Administrator
Water Quality Management

3/19/85
DATE

* *The word permit means "approval, certification, registration, etc."*

(GENERAL CONDITIONS ARE ON THE REVERSE SIDE.)

Let's protect our earth

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NOTICE OF AUTHORIZATION

PERMIT NO.	ISSUANCE DATE	EFFECTIVE DATE	EXPIRATION DATE
NJ0005371	March 19, 1985	May 1, 1985	April 30, 1990

ISSUED TO	FOR ACTIVITY/FACILITY AT	OWNER
GAF Corporation 1361 Alps Road Wayne, NJ 07470	GAF Corporation Charles and Water Streets Gloucester City, NJ 08030	Same as Applicant

ISSUING DIVISION	TYPE OF PERMIT	STATUTE(S)	APPLICATION NO.
Water Resources	NJPDES-DSW	N.J.S.A. 58:10A-1 et seq.	NJ0005371

A PERMIT TO

Discharge to the Delaware River, classified as Zone 3 waters, in accordance with the conditions set forth in Parts I, II, III, and IV hereof.

By the Authority of:
John W. Gaston Jr., P.E.
Director
Division of Water Resources

DEP AUTHORIZATION

DEP-008
2/84

THIS NOTICE MUST BE CONSPICUOUSLY DISPLAYED AT THE ACTIVITY/FACILITY SITE.

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

GENERAL CONDITIONS FOR ALL NJPDES DISCHARGE PERMITS

(a) Duty to comply.

1. The permittee shall comply with all conditions of this permit. No pollutant shall be discharged more frequently than authorized or at a level in excess of that which is authorized by the permit. The discharge of any pollutant not specifically authorized in the NJPDES permit or listed and quantified in the NJPDES application shall constitute a violation of the permit, unless the permittee can prove by clear and convincing evidence that the discharge of the unauthorized pollutant did not result from any of permittees industrial activities which contribute to the generation of its wastewaters. Any permit noncompliance constitutes a violation of the State Act or other authority of these regulations and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

2. A permittee shall not achieve any effluent concentration by dilution. Nor shall a permittee increase the use of process water or cooling water or otherwise attempt to dilute a discharge as a partial or complete substitute for adequate treatment to achieve permit limitations or water quality standards.

3. The permittee shall comply with applicable effluent standards or prohibitions established under Section 307 (a) of the Federal and Section 4 of the State Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

4. The State Act provides that any person who violates a permit condition implementing the State Act is subject to a civil penalty not to exceed $10,000 per day of such violation. Any person who willfully or negligently violates permit conditions implementing the State Act is subject to a fine of not less then $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than 1 year, or both.

(b) Duty to reapply. If the permittee wishes to continue an activity regulated by a NJPDES permit after the expiration date of the permit, the permittee shall apply for and obtain a new permit.

(c) Duty to halt or reduce activity.

1. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

2. Upon the reduction, loss, or failure of the treatment facility, the permittee shall, to the extent necessary to maintain compliance with its permit, control production or all discharges or both until the facility is restored or an alternative method of treatment is provided. This requirement applies, for example, when the primary source of power of the treatment facility fails or is reduced or lost.

(d) Duty to mitigate. The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit, including but not limited to, accelerated and/or additional types of monitoring, temporary repairs or other mitigating measures.

(e) Proper operation, maintenance, and operator licensing. The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment works, facilities, and systems of treatment and control (and related appurtenances) for collection and treatment which are installed or used by the permittee for water pollution control and abatement to achieve compliance with the terms and conditions of the permit. Proper operation and maintenance includes but is not limited to effective performance based on designed facility removals, adequate funding, effective management, adequate operator staffing and training and adequate laboratory and process controls including appropriate quality assurance procedures as described in 40 CFR 136 and applicable State law and regulations. All permittees who operate a treatment works, except for sanitary landfills and land application of sludge or septage, must satisfy the licensing requirements of the "Licensing of Superintendents or Operators of Public Water Treatment Plants, Public Sewage Treatment Plants and Public Water Supply Systems" N.J.S.A. 58:11-18.10 et seq. or other applicable law. This provision requires the operation of back-up or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit or where required by applicable law or regulation.

(f) Permit actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

(g) Property rights. This permit does not convey any property rights of any sort, or any exclusive privilege.

(h) Duty to provide information. The permittee shall furnish to the Department within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.

(i) Inspection and entry. The permittee shall allow the Department or an authorized representative, upon the presentation of credentials and other documents as may be required by law to:

1. Enter upon the permittee's premises where a discharge source is or might be located or in which monitoring equipment or records required by a permit are kept, for purposes of inspection, sampling, copying or photographing. Photography shall be allowed only as related to the discharge.

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the State Act, any substances or parameters at any location.

(j) Monitoring and records.

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

2. The State Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit, shall upon conviction, be punished by a fine of no more than $10,000 per violation, or by imprisonment for not more than 6 months per violations, or by both.

3. The applicant shall perform all analyses in accordance with the analytical test procedures approved under 40 CFR Part 136. Where no approved test procedure is available, the applicant must indicate a suitable analytical procedure and must provide the Department with literature references or a detailed description of the procedure. The Department shall consider such method as the appropriate procedure and so require in the NJPDES permit.

   The laboratory performing the analyses for compliance with this regulation must be Approved and/or Certified by the Department for the analysis of those specific parameters.

   Information concerning laboratory approval and/or certification may be obtained from:

   New Jersey Department of Environmental Protection
   Division of Administrative Operations
   Central Collection and Licensing Unit
   P.O. Box 1390
   Trenton, N.J. 08625
   (609) 292-4071

4. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 5 years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.

5. Records of monitoring information shall include:

   i. The date, exact place, and time of sampling or measurements;

   ii. The individual(s) who performed the sampling or measurements;

   iii. The date(s) analyses were performed;

   iv. The individual(s) who performed the analyses;

   v. The analytical techniques or methods used; and

   vi. The results of such analyses.

6. Monitoring results shall be reported on a Discharge Monitoring Report (DMR) and/or on the Department's Monitoring Report Form (MRF).

7. If the permittee monitors any pollutant more frequently than required by the permit, using test procedures approved under 40 CFR 136 or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or MRF.

8. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Department in the permit.

(k) Signatory requirement.

1. All permit applications, except those submitted for Class II wells for a UIC discharge (see paragraph 2) shall be signed as follows:

   i. For a corporation: by a principal executive officer of at least the level of vice president;

   ii. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

   iii. For a municipality, State, Federal or other public agency: by either a principal executive officer or ranking elected official.

2. Reports. All reports required by permits, other information requested by the Department and all permit applications submitted for Class II wells under N.J.A.C. 7:14A-5.8 shall be signed by a person described in paragraph 1 of this section or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   i. The authorization is made in writing by a person described in paragraph 1 of this section;

   ii. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as a position of plant manager, operator of a well or well field, superintendent or person of equivalent responsibility; and

   iii. The written authorization is submitted to the Department.

3. Changes to authorization. If an authorization under paragraph 2 of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph 2 of this section shall be submitted to the Department prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. Certification. Any person signing any document under paragraph 1 or 2 shall make the following certification: "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

5. Any person who knowingly makes a false statement, representation, or certification in any application, record, or other document filed or required to be maintained under the State Act, shall upon conviction, be subject to a fine of not more than $10,000 or by imprisonment for not more than 6 months, or by both.

(l) Reporting requirements.

1. Planned changes. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility.

2. Anticipated noncompliance. The permittee shall give reasonable advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

3. Transfers. This permit is not transferable to any person except after notice to the Department. The Department may require modification, revocation, or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the appropriate Act. ((See N.J.A.C. 7:14A-2.12); in some cases, modification or revocation and reissuance is mandatory).

4. Monitoring reports. Monitoring results shall be reported at the intervals specified in the permit.

5. Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

6. Reporting.

i. The permittee shall report any noncompliance which may endanger health or the environment. The permittee shall provide the Department with the following information:

(A) A description of the discharge;

(B) Steps being taken to determine the cause of noncompliance;

(C) Steps being taken to reduce and eliminate the noncomplying discharge;

(D) The period of noncompliance, including exact dates and times and if the noncompliance has not been corrected, and the anticipated time when the discharge will return to compliance;

(E) The cause of the noncompliance; and

(F) Steps being taken to reduce, eliminate, and prevent reoccurence of the noncomplying discharge.

ii. The permittee shall orally provide the information in i.(A) through (C) to the DEP Hotline (609) 292-7172 within 2 hours from the time the permittee becomes aware of the circumstances.

iii. The permittee shall orally provide the information in i.(D) through (E) to the DEP Hotline within 24 hours of the time the permittee becomes aware of the circumstances.

iv. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain the information in i.(A) through (F).

7. Other noncompliance. The permittee shall report all instances of noncompliance not reported under paragraphs 1., 4., 5., and 6. of this section, at the time monitoring reports are submitted. The reports shall contain the information required in the written submission listed in paragraph (1)6. of this section.

8. Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, the permittee shall promptly submit such facts or information.

(m) RESIDUALS MANAGEMENT

1. Collected grit and screenings, scums, sand bed sands, slurries, and sludges, and all other solids from the treatment process shall be disposed of in such a manner as to prevent such materials from entering the ground and/or surface waters of the state except in accordance with a NJPDES permit. If for any reason such materials are placed in the water or on the lands where they may cause pollutants to enter the ground and/or surface waters of the state, the following information shall be reported to the Water Resources Enforcement Element together with the monitoring data required in Section B.2 (ADDITIONAL CONDITIONS):

i. Dates of occurrance;

ii. A description of the noncomplying discharge (nature and volume);

iii. Cause of noncompliance;

iv. Steps taken to reduce and eliminate the noncomplying discharge; and

v. Steps taken to prevent recurrence of the conditions of noncompliance.

2. Permittee shall not be permitted to store sludge on-site beyond the capacity of the structural treatment and storage components of the treatment facility. Nor shall the permittee be permitted to store sludge on-site in any manner which is not in accordance with Solid Waste Management Rules, N.J.A.C. 7:26-1 et seq. Any violations must be reported by the Permittee to the Division of Water Resources Enforcement Element within twenty-four (24) hours.

3. The permittee shall comply with the Sludge Quality Assurance Regulations (N.J..A.C. 7:14-4.1 et seq.). Where quality information is required by these regulations, analyses must reflect the quality of the final sludge product of which the permittee must dispose.

4. The permittee shall dispose of sludge from this facility in compliance with the New Jersey Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq., which, requires conformance with Statewide and District Sludge Management Plans and prohibits the disposal of bulk liquids (including but not limited to sludge) in landfills unless the landfill is lined and an approved leachate interception, collection, and treatment system has been installed.

5. The permittee shall at all times have on file with the Department proof of proper disposal at a facility duly licensed and permitted by the state to dispose of sludge. To satisfy this requirement the permittee shall submit proof of ownership or contractual arrangement with a permitted facility for the composting, land application, thermal reduction, or landfilling of sludge.

Where such permitted sludge disposal does not extend the full term of this permit, the permittee shall submit similar proof of new permitted disposal arrangements which shall become effective no later than the expiration date of previous arrangements. All such proofs of disposal site must be submitted to the Bureau of Permits Administration in duplicate.

6. Where this permit is a reissuance of a permit held on a facility approved for operation prior to March 6, 1982, item i below shall apply. Where this permit is issued to a facility approved for operation after March 6, 1982, item ii below shall apply:

i. By issuance of this permit the Department hereby gives the permittee notice that the permittee is bound by the New Jersey Pollutant Discharge Elimination System regulations regarding proper sludge disposal (section 2.5(m)). Possession of this permit in no way waives requirements under this section of the regulations for submission of information regarding termination of landfill disposal of sludge by March 15, 1985.

ii. Where the permittee files with the Department under permit condition m.5. above proof of sludge disposal in a landfill licensed for sludge disposal, the permittee shall submit to the Department a statement of the following within six (6) months of the date of issuance of this permit:

(A) Justification for the continuance of the disposal of sludge in a landfill.

(B) A description of the steps being taken to comply with the March 15, 1985 deadline for abandonment of landfilling for the disposal of sludge.

(C) The manner in which solid sludge will be disposed of until March 15, 1985.

7. The permittee shall comply with the Rules and Regulations for the Statewide Management of Septage Disposal (N.J.A.C. 7:14-5.1 et seq.).

8. The permittee shall conform with the requirements under:

i. Section 405 of the Federal Act governing the disposal of sewage sludge from publicly owned treatment works and with Section 4 and 6 of the State Act.

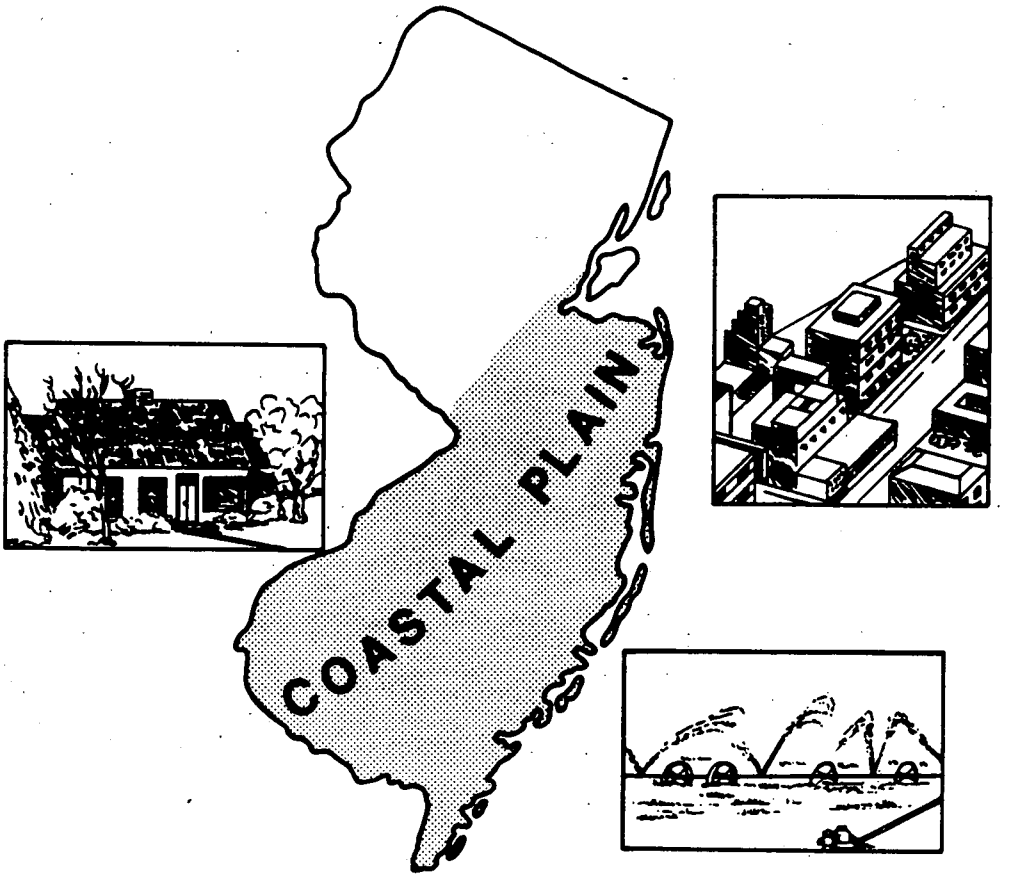
ii. To the extent practicable, the "Guidelines for the Utilization and Disposal of Municipal and Industrial Sludges and Septage"; and

iii. The provisions concerning the disposal of sludge in sanitary landfills which will be developed in the Statewide Sludge Management Plan promulgated pursuant to the "State Solid Waste Management Act." N.J.S.A. 13:1E-1 et seq.

REFERENCE NO. 33

WATER LEVELS IN MAJOR ARTESIAN AQUIFERS OF THE NEW JERSEY COASTAL PLAIN, 1983

U.S. GEOLOGICAL SURVEY
Water-Resources Investigations Report 86-4028



Prepared in cooperation with the
NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION, DIVISION OF WATER RESOURCES

Table 2.--Water-level data for wells screened in the lower aquifer of the Potomac-Raritan-Magothy aquifer system.

Well number	Location: Latitude	Location: Longitude	Owner	Local number	Year drilled	Altitude of land surface[1] (ft)	Screen interval[2] (ft)	Water level 1978: Altitude[1] (ft)	Water level 1978: Date (mo/day)	Water level 1983: Altitude[1] (ft)	Water level 1983: Date (mo/day)	Change in water level (1978-83) (ft)
5-123	395904	750009	NJ WATER CO	DVWC 28	1969	25*	226- 261	-10*	11/09	-12	10/27	-2
5-125	395929	745922	NJ WATER CO	DVWC 10	1959*	79	239- 281	-11	11/09	-15	10/27	-4
5-228	395630	745855	MAPLE SHADE W D	MSWD 10	1975	40	440- 500	-47	11/08	-51	11/03	-4
5-262	395524	745025	US GEOL SURVEY	MEDFORD 4	1967	72	1125-1145	-48	11/06	-57	09/30	-9
5-272	395834	745910	MOORESTOWN T WD	MTWD 7	1969	40	335- 375	-16	11/24	-22	11/01	-6
5-645	400010	745216	WILLINGBORO MUA	WMUA 2-OBS	1965	40	431- 441	-31	11/07	-35	11/01*	-4
5-648	400103	745409	WILLINGBORO MUA	WMUA 3-OBS	1965	34	306- 316*	-20	11/09	-23	10/27	-3
5-746	395727	745915	MAPLE SHADE W D	MSWD 11	1978	20	389- 450	-29	11/09	-34	11/03	-5
5-819	395620	745530	MT LAUREL MUA	MLMUA 6	1982	20	499- 590			-59	11/02	
5-822	395620	745529	MT LAUREL MUA	MLMUA 3	1974	35	592- 642	-48	11/16	-57	11/02	-9
5-823	395615	745512	MT LAUREL MUA	MLMUA 4	1974	35	590- 640	-48	11/16	-62	11/02	-14
7- 12	395221	750637	BELLMAWR B W D	BBWD 3	1956	35	331- 359	-53	12/01	-56	11/07	-3
7- 38	395455	750716	SO JRSY PORT CM	NY SHIP 7	1942	12	188- 229	-23	11/13	-23	11/28	0
7- 47	395524	750729	CAMDEN SEWAGE A	SEWAGE PLANT 1	1954	9	163- 193	-16	11/09	-14	11/28	2
7- 64	395546	750533	CAMDEN CITY W D	CITY 17	1954	34	230- 265	-38	11/12	-39	11/21	-1
7- 68	395557	750535	CAMDEN CITY W D	CITY 13	1953	30	185- 225	-36	11/12	-35	11/21	1
7- 78	395616	750632	CAMDEN CITY W D	CITY 5N	1963	22	134- 169	-26	11/12	-21	11/21	5
7- 79	395617	750710	CAMDEN CITY W D	CITY 12	1945	23	136- 166	-17	11/12	-13	11/21	4
7- 83	395638	750622	CAMDEN CITY W D	CITY 1A	1953	10	135- 170	-33	11/09	-25	11/21	8
7- 90	395652	750607	CAMDEN CITY W D	CITY 10	1935	10	126- 158	-31	11/09	-24	11/21	7
7- 94	395706	750553	CAMDEN CITY W D	CITY 16	1954	23	149- 179	-32	11/08	-26	11/21	6
7-107	395720	750513	NJ WATER CO	CAMDEN DIV 51	1965	20	141- 192			-35	01/10*	
7-108	395719	750518	NJ WATER CO	CAMDEN DIV 10	1932	11	115- 150*	-34	11/09	-29	01/10*	5
7-112	395728	750520	NJ WATER CO	CAMDEN DIV 48	1954	10	122- 164			-30	01/10*	
7-121	395252	745943	NJ WATER CO	BROWING T-1	1973	80	672- 730	-85	11/08	-94	11/10	-9
7-123	395252	745943	NJ WATER CO	BROWNING 46	1973	81	664- 735	-84	11/08	-92	11/10	-8
7-130	395353	745708	NJ WATER CO	OLD ORCHARD A	1967	71	743- 748	-67	11/08	-75	11/10	-8
7-144	395442	750103	NJ WATER CO	ELLISBURG 13	1953*	39	491- 527	-60	11/09	-64	11/16	-4
7-163	395609	750028	NJ WATER CO	COLUMBIA 22	1960	39	371- 453	-46	11/09	-51	11/10	-5
7-171	395426	750514	COLLINGSWOOD WD	CWD 7(B)	1965	10	224- 313	-46*	11/07	-45	11/03	1
7-172	395426	750514	COLLINGSWOOD WD	CWD 6(A)	1965	10	218- 312	-41*	11/07	-40	11/03	1
7-175	395521	750439	COLLINGSWOOD WD	CWD 1R	1949*	25	266- 306	-51	11/07	-48	11/03	3
7-178	395522	750432	COLLINGSWOOD WD	CWD 3	1960	15	257- 287	-44	11/07	-41	11/03	3
7-179	395526	750424	COLLINGSWOOD WD	CWD 5	1956	10	248- 278	-46	11/07	-44	11/03	2
7-184	394950	745855	NJ WATER CO	GIBBSBORO OB 1	1969	70	1081-1091	-77	11/13	-92	11/10	-15
7-185	394950	745855	NJ WATER CO	GIBBSBORO OB 2	1969	70	940- 950	-76	11/13	-84	11/10	-8
7-194	395308	750744	G & W NATURAL R	4-DEEP	1958	8*	249- 279	-55*	07/12*	-55	11/08	0
7-196	395308	750757	G & W NATURAL R	2-DEEP	1954	6	245- 275			-59	11/08	
7-197	395313	750804	G & W NATURAL R	3-DEEP	1958	8	223- 253			-60	11/08	
7-201	395318	750755	AMSPEC CHEMICAL	HARSHAW 1	1948	5	246- 266			-57	11/08	
7-204	395322	750757	AMSPEC CHEMICAL	HARSHAW 4	1953	5	235- 260			-55	11/08	
7-205	395324	750736	HINDE AND DAUCH	3	1945	7	230- 250			-50	11/10	
7-206	395329	750732	HINDE AND DAUCH	2	1945	9	231- 251			-47	11/10	
7-207	395332	750734	HINDE AND DAUCH	JERSEY AVE 1	1945	9	230- 250			-47	11/10	
7-220	395349	750651	GLOUCESTER C WD	GCWD 40	1961	10	221- 261			-41	01/20*	
7-221	395356	750738	US GEOL SURVEY	COAST GUARD 1	1966	11*	162- 170	-38*	11/22	-35	12/02	3
7-273	395030	750347	NJ WATER CO	OTTERBROOK 29	1965	60	612- 712	-72	11/08	-71	11/07	1
7-278	395238	750316	NJ WATER CO	HADDON 15	1956	65	452- 594	-72	11/09	-76	11/07	-4
7-281	395242	750323	NJ WATER CO	HADDON 14	1954	76	506- 598	-72	11/09	-76	11/07	-4
7-283	395246	750434	NJ WATER CO	EGBERT	1962	24	445- 455	-63*	11/09	-65	11/07	-2
7-289	395403	750322	HADDON TWP W D	HTWD 2	1952	60	439- 470	-64	11/09	-66	11/10	-2
7-290	395406	750317	HADDON TWP W D	HTWD 1	1952	56	436- 468	-67	11/09	-66	11/10	1
7-292	395406	750332	HADDON TWP W D	HTWD 4	1965	45	417- 448	-63	11/09	-64	11/10	-1
7-302	395319	750140	HADDONFIELD W D	RULON	1956	25	523- 572	-72	11/08	-79	11/04	-7
7-320	395652	750307	MCHVIL PNSK WCM	WOODBINE 1	1963	65	245- 285	-37	11/14	-40	11/04	-3
7-332	395711	750220	MCHVIL PNSK WCM	MARION 2	1963	65*	223- 258	-42*	11/14	-45	11/04	-3
7-335	395720	750225	MCHVIL PNSK WCM	MARION 1	1957	61	243- 278	-33	11/14	-35	11/04	-2
7-337	395737	750626	US GEOL SURVEY	PETTY ISLAND 2	1966	5	129*			-19	11/03	
7-348	395801	750119	MCHVIL PNSK WCM	PARK AVE 3	1958	25*	240- 275	-34*	11/14	-35	11/03	-1
7-359	395835	750308	CAMDEN CITY W D	PUCHACK 5	1924	30	136- 181	-20	11/19	-26	12/06	-6
7-368	395848	750347	CAMDEN CITY W D	DELAIR 1	1930*	10	103- 139	-13	11/19	-22	12/06	-9
7-370	395853	750348	CAMDEN CITY W D	DELAIR 3	1930	8	87- 129	-13	11/19	-17	12/06	-4
7-373	395900	750318	CAMDEN CITY W D	MORRIS 6	1932	14	98- 133	-14	11/19	-25	11/17	-11
7-375	395910	750307	CAMDEN CITY W D	MORRIS 8	1953*	10	124*	-15	11/19	-22	11/17	-7
7-379	395919	750302	CAMDEN CITY W D	MORRIS 10	1960	16	75- 115	-16	11/19	-12	11/17	4
7-382	395929	750253	CAMDEN CITY W D	MORRIS 4A	1960	8	95- 138	-12	11/19	-11	11/17	1
7-390	395944	750211	CAMDEN CITY W D	MORRIS 1	1961	9	107*	-6	11/19	-5	11/17	1
7-412	394922	745630	NJ WATER CO	ELM TREE 2	1963	149	1082-1092	-63*	11/16	-73	11/09	-10
7-523	395152	750542	BELLMAWR B W D	BBWD 5	1977	75	458- 557	-62	12/01	-64	11/07	-2
7-527	395550	750537	CAMDEN CITY W D	PARKSIDE 18	1976	40	258- 288	-37	11/12	-37	11/21	0

WELL USED FOR DEPTH TO WATER